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Impact of Brand Familiarity on Attitude Formation: Insights and Generalizations from a Meta-Analysis

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Brand Familiarity and Attitude Formation: A Meta-Analysis of Advertising, Product, and Brand Moderators

Abstract

Purpose: This research investigates the effects of brand familiarity on attitude formation across different advertising channels, product types, and brand settings.

Design/methodology/approach: A meta-analysis containing 107 empirical studies with 183 effects sizes tests a theoretical model according to situational moderators and methodological factors of brand familiarity.

Findings: Brand familiarity has stronger positive impacts on attitude formation under particular advertising tools (online and real advertising), product types (hedonic and mature products), and brand characteristics (memory-based recall). The findings also depend on methodological factors such as student samples, laboratory settings, and non-estimated effect sizes.

Originality/value: This meta-analytic study reconciles prior inconsistencies and advances the understanding of brand familiarity across key advertising, product, and brand moderators.

Keywords: attitude formation, brand familiarity, meta-analysis, moderators
Paper type: Research paper

1. Introduction

Building strong brand familiarity is essential for success in competitive markets (Jeong, 2017; Ruiz-Equihua *et al*., 2020; Verhellen *et al*., 2016). Notably, brand familiarity became a recent trending topic in the pandemic context, since 75% of shoppers prefer buying familiar brands in many categories (*Forbes*, 2021a; *Harvard Business Review*, 2019, 2020). Indeed, across platforms, highly familiar brands have enjoyed as much as 23% increased revenues (*Forbes,* 2021b).

In the last 40 years, more than 300 scholarly articles have addressed the managerial and theoretical implications of brand familiarity. A key contribution is the premise that brand familiarity affects the formation of consumer attitudes (Auschaitrakul and Mukherjee, 2017; Boronczyk and Breuer, 2020; Catalán *et al*., 2019; Herédia-Colaço *et al*., 2019; Li *et al*., 2020; Morgan *et al*., 2021). However, these studies demonstrate inconsistent effects of brand familiarity on attitude formation, given its variety of types of advertisements, products, and brand contexts (Auschaitrakul and Mukherjee, 2017; Ilicic and Webster, 2014; Kim *et al.*, 2017; Thomas and Fowler, 2015). The inconsistencies prevent scholars from generalizing about the impacts of brand familiarity (Higgins and Thompson, 2002) and hinders managerial decisions about the best approaches for establishing brand familiarity (Babić Rosario *et al*., 2016; Neumann and Böckenholt, 2014; Vieira, 2013).

To address the gap, this research formed a meta-analytical framework for examining how brand familiarity relates to attitude formation. Advertising tools, product types, and brand contexts are tested as theoretically grounded moderators. The paper further describes meta-analytical procedures and effect sizes of the moderating variables. Finally, this paper provides insights and generalizations that help advance theoretical and conceptual knowledge for brand familiarity research.

2. Brand Familiarity and Attitude Formation

Consumers have direct and indirect experiences through which they acquire *brand familiarity* that allows them to easily recall specific brand names and brand associations (Catalán *et al*., 2019; Copeland and Bhaduri, 2019; Dahlén and Lange, 2004; Davtyan *et al.*, 2021; Delgado-Ballester *et al.*, 2012; Keller, 2003; Lafferty, 2009;

Morgan *et al.*, 2021; Phelps and Hoy, 1996; Van Berlo *et al.*, 2020). Consumers who are highly familiar with brand names tend to form positive associations and attitudes toward brands, but they do not do so in relation to unfamiliar brands (Huang, 2016).

The literature presents two main streams of brand familiarity, as a unidimensional (Baker *et al.*, 1986) or a multidimensional construct (Mitchell, 1982; Krishnan, 1996). The unidimensional brand familiarity construct considers overall information processing (Baker *et al.*, 1986), but the multidimensional construct considers various types of information derived from information searches, advertising effects, customer-provider interactions, repetitive brand use, and word of mouth (Krishnan, 1996; Mitchell, 1982).

Consumers tend to use their experiences as a basis for forming attitudes (Ajzen, 2001; Fazio *et al.*, 2004; Felix and Borges, 2014; Petty *et al.*, 1997; Schmidt and Eisend, 2015). Experiences with familiar brands determine whether they form favorable or unfavorable attitudes, predispositions, evaluations, and decisions about purchasing brands (Boronczyk and Breuer, 2020; Garczarek-Bąk et al., 2021; Kamins and Marks, 1991; Kim *et al.*, 1998; Li *et al.*, 2020; Priester *et al.*, 2004; Van den Berg *et al*., 2006). However, when confronted with unfamiliar brands, their lack of experience will inhibit information processing and attitude formation (Davtyan *et al.*, 2021; Delgado-Ballester *et al.*, 2012, Verhellen *et al.*, 2016), which leads to the first hypothesis:

H1. Brand familiarity positively affects attitude formation.

3. Brand Familiarity Studies: Key Moderators

This study seeks to better understanding the moderating variables involved in brand familiarity-attitude formation. Because studies often report heterogeneous findings (Higgins and Thompson, 2002), meta-analyses are particularly focused on variations in distinct research designs and methods (Aguirre-Rodriguez *et al*., 2012; Babić Rosario *et al*., 2016; Neumann and Böckenholt, 2014; Vieira, 2013) or variations in theoretical constructs (Fern and Monroe, 1996; Morris and DeShon, 2002).

Particularly relevant to this study is the understanding that attitudes are formed by external information sources such as advertising, customer-provider interactions (Felix and Borges, 2014), brand recall (Jeong and Biocca, 2012; Martí-Parreño *et al.*, 2017; Morrin and Ratneshwar, 2000), product-based experiences (Guido *et al.*, 2007;

Hirschman and Holbrook, 1982; Voss *et al.*, 2003), types of media used for advertising (Auschaitrakul and Mukherjee, 2017; Jeong, 2017; Kim *et al.*, 2017; Lee *et al.*, 2018) and celebrity endorsers (Ilicic and Webster, 2014; Thomas and Fowler, 2015). Consumers tend to form the most favorable attitudes toward well-known brands such as Coca-Cola, Nike, and Apple (Graeff, 2007) in contrast with lesser-known brands (Müller *et al.*, 2013; Sheinin, 2000). Attitudes may depend on whether products serve hedonic or utilitarian purposes or whether products are well established or just beginning to grow. The proposed model of brand familiarity includes situational and methodological moderators to overcome potential heterogeneities across brand familiarity studies (Figure 1).

Insert Figure 1 here

3.1. Situational moderators

Brand familiarity effects depend on situational moderators. For example, consumers will have various levels of brand familiarity when brands are advertised online, through print, or on TV. Brand familiarity also varies depending on whether advertisers use celebrity endorsers, and on whether they feature fictitious or realistic ad stimuli. In terms of products, brand familiarity depends on whether products are in growth versus mature life cycle stages, have hedonic versus utilitarian values, or come from similar (vs. different) product categories. Consumers also form attitudes depending on whether their brand recall comes from memory or advertising stimuli, and whether they perceive high or low risk in using a brand.

3.1.1. Advertising Settings

Prior research on branding suggests that advertising channels cause differing cognitive responses on consumers (Eisend and Küster, 2011; Havlena *et al.*, 2007; Tan and Chia, 2007). For instance, TV commercials may stimulate more senses, reach wider audiences, be more persuasive, and evoke greater recall than print and online advertising (Dijkstra *et al.*, 2005; Draganska *et al.*, 2014; Rodgers and Thorson, 2000), leading to the second hypothesis:

H2a. Advertising channels (online vs. print vs. TV) moderate brand familiarity effects on attitude formation.

Celebrity endorsements have been shown to enrich brand attitudes (Felix and Borges, 2014; Ilicic and Webster, 2014; McCormick, 2016; Silvera and Austad, 2004; Thomas and Fowler, 2015; Till and Shimp, 1998; Spry *et al*., 2011), brand knowledge, and brand image (Ilicic and Webster, 2014; Carrillat *et al*., 2014). Celebrity endorsements are particularly effective for drawing attention and standing out in competitive media spaces (Ilicic and Webster, 2014) when the endorsements are used by highly familiar brands such as L'Oreal, Nivea, and Porsche (Felix and Borges, 2014). Therefore:

H2b. Celebrity endorsement (presence vs. absence) moderates brand familiarity effects on attitude formation.

In the real advertising world, brand familiarity has been shown to reduce the cognitive effort needed to process ads, which then determines brand attitudes (DeLorme and Reid 1999; Eisend, 2009; Kent and Allen 1994; Nelson *et al.*, 2006. In controlled experimental environments, brand unfamiliarity has been shown to generate weak brand attitudes (Nelson *et al.*, 2006; Woltman *et al*., 2004). For instance, an online study divided participants into two groups: one viewed a real Coca-Cola advertisement; the other viewed a fictitious advertisement for Jolt Cola. The real ad was shown to generate the most positive brand attitudes (Mau and Silberer, 2008). In another study, participants expressed positive attitudes toward a real ad for Fanta and less positive attitudes toward fictitious ads for Fungo (Delgado-Ballester *et al*., 2012). Thus, familiarity with well-known brands generates the most positive brand attitudes (Campbell and Keller, 2003), formally hypothesized:

H2c. Ad stimuli (real vs. fictitious) moderates brand familiarity effects on attitude formation.

3.1.2. Product Settings

Brand familiarity effects also depend on product life cycles, product values, and product categories. Products progress through development cycles, beginning with introductory stages, growing to maturity, and then declining (Engelen, *et al*, 2010). Accordingly, consumers will have the strongest familiarity with brands that have gained reputations in their mature stages (Eisend and Stokburger-Sauer, 2013; Babić Rosario, *et al*., 2016), leading to the hypothesis:

H3a. Product life cycle (maturity vs. growth) moderates brand familiarity effects on attitude formation.

Consumers are more likely to value products that bring hedonic benefits over products that bring utilitarian benefits (Dhar and Wertenbroch, 2000). Highly familiar brands that offer hedonic products are most likely to evoke information processing and attitude formation (Babić Rosario *et al.*, 2016; Eisend and Stokburger-Sauer, 2013). Therefore:

H3b. Product value (hedonic vs. utilitarian) moderates brand familiarity effects on attitude formation.

Companies will make different decisions about product development, brand extensions, and product positioning for products in various categories (Viswanathan and Childers, 1999), but they will use similar marketing strategies for similar product categories (Sanchez, 2004). Similar product categories follow the same pattern in evoking similar consumer attitudes, but different categories draw different attitudes (Johnson and Fornell, 1991). More formally:

H3c. Product category (similar, different) moderates brand familiarity effects on attitude formation.

3.1.3. Brand Settings

Consumers recall their associations with familiar brands when they receive stimuli from their memory or from environmental sources such as stores, websites, and advertisements (Lee, 2002). Memory involves immediately compelling and rich affect,

and thus memory-based stimuli evokes strong attitudes (Lee, 2002; Rottenstreich *et al.*, 2006; Sanbonmatsu and Fazio, 1990). In contrast, stimulus-based recall has less effect on emotions, involves less cognitive load, and less conceptual fluency (Lee, 2002; Rottenstreich *et al.*, 2006), leading to the prediction:

H4a. Brand recall (memory-based vs. stimulus based) moderates brand familiarity effects on attitude formation.

In addition, brands are associated with varying perceptions of risk and uncertainties (Erdem and Swait, 2004). Negative attitudes arise from perceptions that brands are highly risky, but positive attitudes arise from perceptions that brands carry tolerable risk (Babić Rosario *et al*., 2016), leading to the hypothesis:

H4b. Perceived risk (high vs. low) moderates brand familiarity effects on attitude formation.

3.2. Methodological moderators

Four methodological moderators were tested in this study: sample type (student, non-student), study setting (natural, laboratory), effect size (estimated, non-estimated) and market type (Western, Eastern). Prior meta-analytical studies suggest that the sample type may cause heterogeneity in effect sizes (Peterson, 2001; Janakiraman *et al*., 2016; Eisend, 2017), such that student samples are usually more homogeneous than nonstudent samples (Fern and Monroe, 1996; Vieira, 2013). Considering that brand familiarity studies have been based on both student and nonstudent samples, this research examines whether:

H5a. Sample type (student, nonstudent) moderates brand familiarity effects on attitude formation.

Study setting also significantly influences effect sizes (Eisend, 2017). In natural settings, researchers lack control over extraneous variables so that effect sizes have reduced explanatory power (Vieira, 2013). In laboratory settings, however, more

homogeneous main effect manipulations are possible, increasing effect sizes (Fern and Moroe, 1996). Thus, this research tested whether:

H5b. Study setting (natural, laboratory) moderates brand familiarity effects on attitude formation.

The effect-size estimation variable might affect meta-analytical results. Estimated effect sizes are usually extracted from primary studies using Beta, regression, t-values, t-test, F-values, and chi-square; non-estimated effect sizes come from Person, Kendal, or Spearman extracted data (Guido *et al.*, 2007). Compared to non-estimated effect sizes, estimated effect sizes can be underestimated and have multicollinearity effects (Guido *et al.*, 2007; Vieira, 2013). In some cases, the classic presentation format in published articles may cause underestimated effects (Vieira, 2013). Therefore, this research tested whether:

H5c. Effect size (estimated, non-estimated) moderates brand familiarity effects on attitude formation.

Consumers in Western and Eastern markets have cultural differences that evoke differing values and attitudes (Ellis, 2006; Hofstede, 1980). Compared with Eastern marketing practices, Western marketers tend to be more competitive and to build strong brand familiarity through advertising (Ellis, 2006; Jiménez and San Martín, 2010; Rosenbloom *et al*., 2012; Supphellen and Grønhaug, 2003). For example, a study comparing Western U.S. consumers with Eastern Russian consumers showed that Americans have the highest levels of brand familiarity (Mikhailitchenko *et al*., 2009). Therefore, this research tested whether:

H5d. Market type (Western, Eastern) moderates brand familiarity effects on attitude formation.

3. Method

Researchers use meta-analyses to integrate conflicting results from academic literature and thus derive a more in-depth understanding of issues (Fern and Monroe,

1996; Lipsey and Wilson, 2001). This meta-analysis included a systematic review following the PRISMA protocol (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) (Moher *et al.*, 2015) with well-grounded meta-analytic recommendations (Rosenthal and Rubin, 1991) and data extraction methods (Rust and Cooil, 1994).

The search for relevant articles of brand familiarity effects on attitude formation in consumer behavior and marketing science used the keywords *brand familiarity, familiar brands*, *familiarity brand scale*, *effect of brand familiarity*, and *impact of brand familiarity*, ranging from 1978 and 2021.

The targeted scientific databases included EBSCO, Elsevier's Science Direct, ProQuest, Emerald, Google Scholar, Jstor, Scielo, Scopus and Taylor & Francis. Theses and dissertations were identified through Google Scholar and ProQuest platforms. The search generated 873 articles, but 589 were rejected because they were theoretical, qualitative, quantitative without providing values for calculated effect sizes, irrelevant, or presented insufficient statistics for use in the regression calculation. Consequently, the meta-analysis includes 286 studies that generated 1,135 observations from a sample of 18,581 respondents; 107 studies and 183 effects sizes specifically tested the relationship between brand familiarity and attitude formation.

Second, following Rust and Cool (1994), this research used a coding procedure focused on moderating factors that influence the relationship between brand familiarity and attitude formation. Two independent coders conducted coding processes. A third coder was available to resolve coding divergences. They identified 107 primary studies. Inter-coder reliability was 92%.

The situational moderators analyzed were advertising channels (online, print, TV), celebrity endorsement (presence, absence), ad stimuli (fictitious, real), product life cycle (maturity, growth), product value (hedonic, utilitarian), product category (similar, different), brand recall (memory-based, stimulus-based), and perceived risk (high, low). In addition, this study tested key methodological factors: sample type (student, non-student), study setting (natural, laboratory), effect size (estimated, non-estimated) and market type (Western, Eastern). Table 1 shows describes the coding procedures.

Insert Table 1 here

The meta-analysis also extracted information for the calculation of effect sizes: sample size, type of sample, collection type, scale index alphas, variance scale indices, statistics for construct relationships, and correlation conversions. Pearson's correlations were corrected by the sample size of each study. When studies failed to present correlation effects, the conversions used standard regressions, Fs, or T-tests following Hedges and Olkin (1985). All effects were calculated by random effect, as per Schmidt and Hunter (1998), because it is more generalizable to studies that have heterogeneous sample sizes (Rosenthal and Rubin, 1991). The correlation transformation was made by Fisher's Z-distribution. The upper and lower confidence interval index was also analyzed at the 95% level, which comprises an estimate of the mean range of corrected weighted correlations (Schmidt and Hunter, 1998). Q and I^2 tests were used to analyze the level of heterogeneity of the direct relationship. Cochran's Q verifies whether the data found in a primary study refute the null hypothesis. If the null hypothesis is confirmed ($p > .05$), the studies are considered homogeneous (Lau *et al.*, 1998). The I^2 statistic is obtained through the Q statistic and can vary from values 0 to 100%. Studies with a 25% index show low heterogeneity; studies with 50% values show moderate heterogeneity; those above 75% show high heterogeneity (Higgins *et al.*, 2003).

4. Results

The weighted mean effect size across all 183 cases was $r = .478$, supporting *H1* (95% confidence interval: low = .433 to high = .581; $p < .001$). Homogeneity analysis revealed a statistically significant Q score of 6,736.38 ($I^2 = 97.3$; $p < .001$), suggesting high heterogeneity in the effect size distribution. High levels of heterogeneity imply that contextual factors might interfere in the relationship between brand familiarity and attitude formation, calling for a formal analysis of the moderating variables (Table 2).

Insert Table 2 here

4.1. Situational Moderators

Situational moderators were advertising types, products, and brands (see Figure 2 for density levels). *H2a* regarding advertising channels was partially supported:

significant differences occurred only for estimates involving print and online advertising ($\beta = .516$; $r_{Online} = .377$; $r_{Print} = .216$; $p < .05$), but not for television advertising ($r_{Television} = .611$; $p = .372$), indicating that brand familiarity effects are stronger for online than for print advertising, perhaps because online channels transfer information more rapidly and generate higher brand recall (Draganska *et al.*, 2014).

Insert Figure 2a here

Ad endorsement (*H2b*) analysis suggested that celebrity endorsement increases the impact of familiarity on attitude formation ($\beta = .409$; $r_{Presence} = .553$; $r_{Absence} = .342$; $p < .001$), as supported by the density graph. The absence of celebrity endorsement is represented by high densities at lower levels of effect sizes. In contrast, the presence of celebrity endorsement is represented by high densities at higher levels of effect sizes. The results indicate that celebrity endorsers increase positive recognition for familiar brands (Thomas and Fowler, 2015), perhaps by increasing visual attention (Ilicic and Webster, 2014).

Ad stimuli (*H2c*) shapes brand familiarity effects: real advertising increases the effects; fictional advertising does not ($\beta = .246$; $r_{Real} = .504$; $r_{Fictional} = .194$; $p < .001$). Density distribution shows that fictitious advertisements have higher density for lower effects, whereas real advertisements have higher density for higher effects, indicating that real advertising strengthens attitude formation and information processing (Delgado-Ballester *et al.*, 2012; Eisend, 2009; Mau and Silberer, 2008; Nelson *et al.*, 2006).

Second, situational moderators regarding product characteristics were tested: product life cycle (*H3a*), product value (*H3b*), and product category (*H3b*). *H3a* is supported by evidence that mature products show greater brand familiarity effects than growth stage products ($\beta = .348$; $r_{Mature} = .504$; $r_{Growth} = .299$; $p < .001$). *H3b* is also supported ($\beta = .518$; $r_{Hedonic} = .413$; $r_{Utilitarian} = .345$; $p < .05$) by indications that familiarity has stronger impacts on attitude formation for hedonic (vs. utilitarian) products, indicating that hedonic products promote stronger brand attitudes. In contrast, *H3c* tests indicate that product category fails to shape brand familiarity effects ($\beta = .319$; $r_{Similar\ category} = .279$; $r_{Different\ categories} = .472$; $p = ns$).

Third, this research tested brand recall (*H4a*) and perceived risk (*H4b*) moderators. *H4a* analysis showed that memory-based recall was stronger than stimulus-based recall for generating brand recall ($\beta = .582$; $r_{Memory\text{-}based} = .472$; $r_{Stimulus\text{-}based} = .341$; $p < .01$). The findings were further reinforced by the fact that memory-based recall had a higher density for larger effect-sizes (Lee, 2002; Rottenstreich *et al.*, 2006). However, *H4b* test indicated that perceived risk ($\beta^{af} = .491$; $r^{af}_{High} = .352$; $r^{af}_{Low} = .345$; $p = ns$) failed to moderate brand familiarity effects.

4.2. Methodological Moderators

Three hypotheses were supported regarding the methodological moderators of brand familiarity effects. *H5a* (sample type) shows that student samples have stronger brand familiarity effects than nonstudent samples ($r_{Student} = .533$; $r_{Nonstudent} = .399$; $p < .001$), suggesting that student samples are more homogeneous and yield stronger effect sizes (Eisend, 2017; Fern and Monroe, 1996). Investigation of *H5b* (study setting) demonstrated that laboratory settings are more likely than natural studies to indicate strong brand familiarity effects ($r_{Laboratory\ setting} = .534$; $r_{Natural\ setting} = .411$; $p < .001$), probably because researchers in natural settings lack control over extraneous variables and the effect sizes have less explanatory power (Eisend, 2017).

Overall, investigation of *H5c* (effect size estimation) showed that the non-estimated rather than estimated effect sizes had the greater brand familiarity effects ($r_{Non\text{-}estimated} = .456$; $r_{Estimated} = .374$; $p < .05$), which aligns with previous meta-analytical research showing that effect sizes are often underestimated and have multicollinearity effects (Vieira, 2013). Finally, market type (*H5d*) indicated nonsignificant differences in brand familiarity effects ($r_{Western} = .378$; $r_{Eastern} = .448$; $p = ns$). Figure 2b shows density levels for each methodological moderator.

Insert Figure 2b here

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5. Discussion

This meta-analytical research combines several primary studies to synthesize effects related to brand familiarity and attitude formation. Brand familiarity is a critical

factor determining how consumers form attitudes toward brands (Martí-Parreño *et al.*, 2017). This research demonstrates that primary studies of brand familiarity have highly heterogeneous discrepancies in effect sizes, indicating a need for a meta-analysis to clarify findings (Fern and Monroe, 1996; Higgins and Thompson, 2002). Thus, this meta-analytical study consolidates, integrates, and reconciles research on brand familiarity effects on consumer attitude formation (Auschaitrakul *et al.*, 2017; Dessart, 2018; Morgan *et al.*, 2021). The proposed model evaluates variations in effect sizes across several studies, offering guidance for academic researchers and managerial decision-makers.

5.1 Academic and Managerial Implications

This research advances academic knowledge about brand familiarity effects on attitude formation. By drawing more generalizable conclusions from studies conducted in retail, online, and television contexts, the study makes several contributions to academic studies of brand familiarity and brand management.

First, this research identifies important situational and methodological moderators that determine brand familiarity effects and contribute to several literatures. This study empirically demonstrates that brand familiarity effects depend on situational circumstances such as advertising channels, celebrity endorsers, advertisement content, and brand recall. Television advertising has been assumed to be the advertising channel that generates the most positive cognitive responses (Eisend and Küster, 2011; Li and Lo, 2015), but this meta-analysis suggests that online advertising is more effective for generating brand familiarity. By doing so, this research adds to the brand familiarity literature regarding advertising in online environments (Van Berlo *et al*., 2020; Catalán *et al*., 2019; Davtyan *et al*., 2021; Verhellen *et al*., 2016) by finding that consumers form the strongest brand attitudes when they gain brand familiarity through online advertising and memory-based brand recall.

Memory-based recall stimulates more affect, cognitive load, and conceptual fluency, and is thus more powerful than stimulus-based recall for generating brand familiarity effects. In addition, the findings indicate that celebrity endorsers increase brand familiarity effects and cognitive processing (Felix and Borges, 2014; Ilicic and Webster, 2014). Thus, contributing to brand communication literature (Halder *et al*.,

2021), this study shows that when real brands use celebrity endorsers, consumers form more positive brand attitudes toward familiar brands.

Second, direct and indirect experiences strongly affect attitude formation (Kim *et al.*, 1998). Product life cycle and product value also moderate brand familiarity effects. This research shows that consumers form more positive brand attitudes toward products that are in mature rather than growing life cycles and that are used for hedonic rather than utilitarian purposes, adding to consumer-brand relationship and brand familiarity literature (e.g., Morgan *et al.*, 2021). In addition, as expected, real rather than fictitious advertisements require less cognitive effort, evoke fewer risk perceptions, and generate the strongest brand familiarity (DeLorme and Reid 1999; Nelson *et al*., 2006).

Third, regarding methodology and aligned with recent meta-analytical studies, findings indicate that studies performed with student samples, in laboratory settings, and with non-estimated effect sizes tend to find the strongest brand familiarity effects. Therefore, this meta-analysis extends seminal work by testing the methodological factors that shape variations in the relationship between brand familiarity and attitude formation.

In practical terms, the findings also provide recommendations for managers and marketers who want to increase affective or cognitive consumer connections with brands. Recommended strategies for enhancing brand familiarity include the use of online advertising, celebrity endorsements, and advertising campaigns that use realistic appeals. For example, consumers who are highly familiar with a brand will respond more favorably to a photo (real ad) rather than a drawing of a product.

5.2 Directions for Further Research and Limitations

Future research could help researchers and practitioners by examining other moderators that influence attitude formation. Several key moderators that could influence brand familiarity effects were not tested in this meta-analysis due to the limited number of studies: perceived brand globalness versus localness, corporate social responsibility (CSR actions), deliberate versus incidental attention, and cognitive versus affective brand evaluations. Such factors – perceived globalness, CSR actions, deliberate attention, affective evaluations – could boost brand familiarity effects on attitude formation. New meta-analytical reviews and new experimental studies should expand the testing of these moderators.

In addition, future studies should deepen the understanding of brand familiarity effects in contemporary marketing contexts, such as: sharing economy and social media platforms, brand familiarity post-COVID, and the role of Artificial Intelligence (AI) in brand familiarity. These contexts might shape brand familiarity, since sharing economy platforms and social media contexts might foster stronger customer-brand relationships. In addition, post-pandemic contexts, combined with the rise of AI, might increase customers' preference for well-known brands, avoiding additional risks and ensuring their personal data is secure.

Finally, this research has limitations inherent to the use of meta-analytical procedures. The nonsignificant findings for some of our variables (e.g., market types and perceived risk) show that those variables fail to affect brand familiarity and should be considered when generalizing meta-analytic findings. Also, future studies should integrate qualitative and quantitative methods to provide empirical generalizations. This integration should aim to generate alternative construct definitions and measures of brand familiarity (e.g., multidimensional measures), expanding its scope. Finally, additional studies should account for other variables found in the brand familiarity literature, such as brand recognition, brand recall, brand association, brand identification, brand experience, and brand memory. Further studies should be more inclusive and account for these factors.

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Figure 1. Theoretical model of brand familiarity and attitude formation

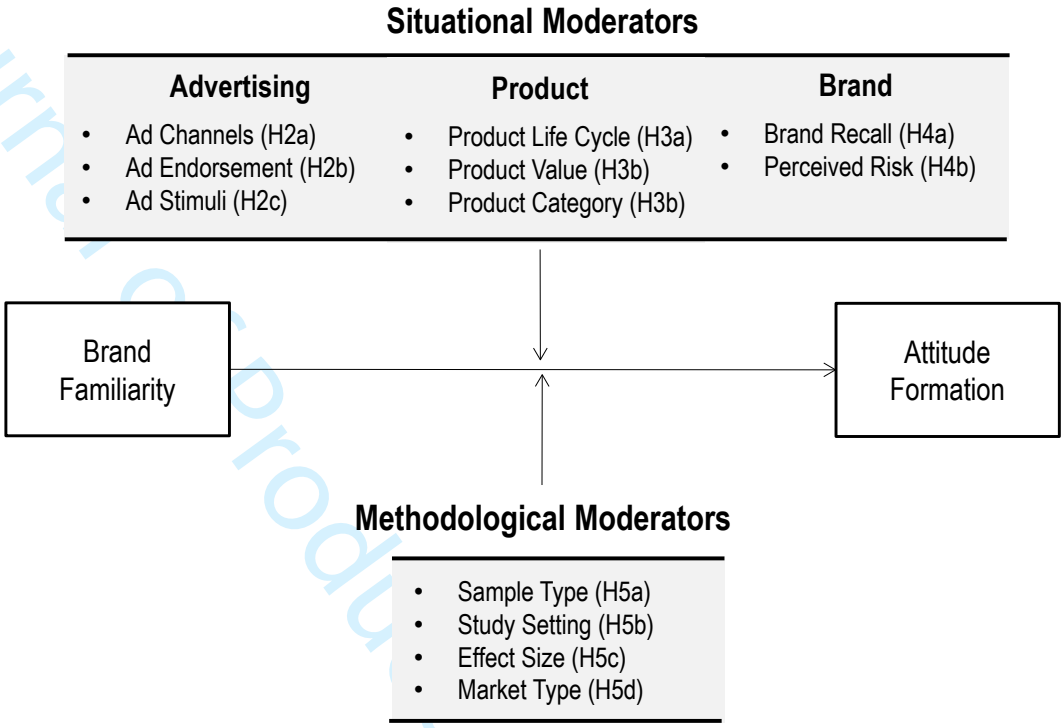

Figure 2a. Density levels of situational moderators

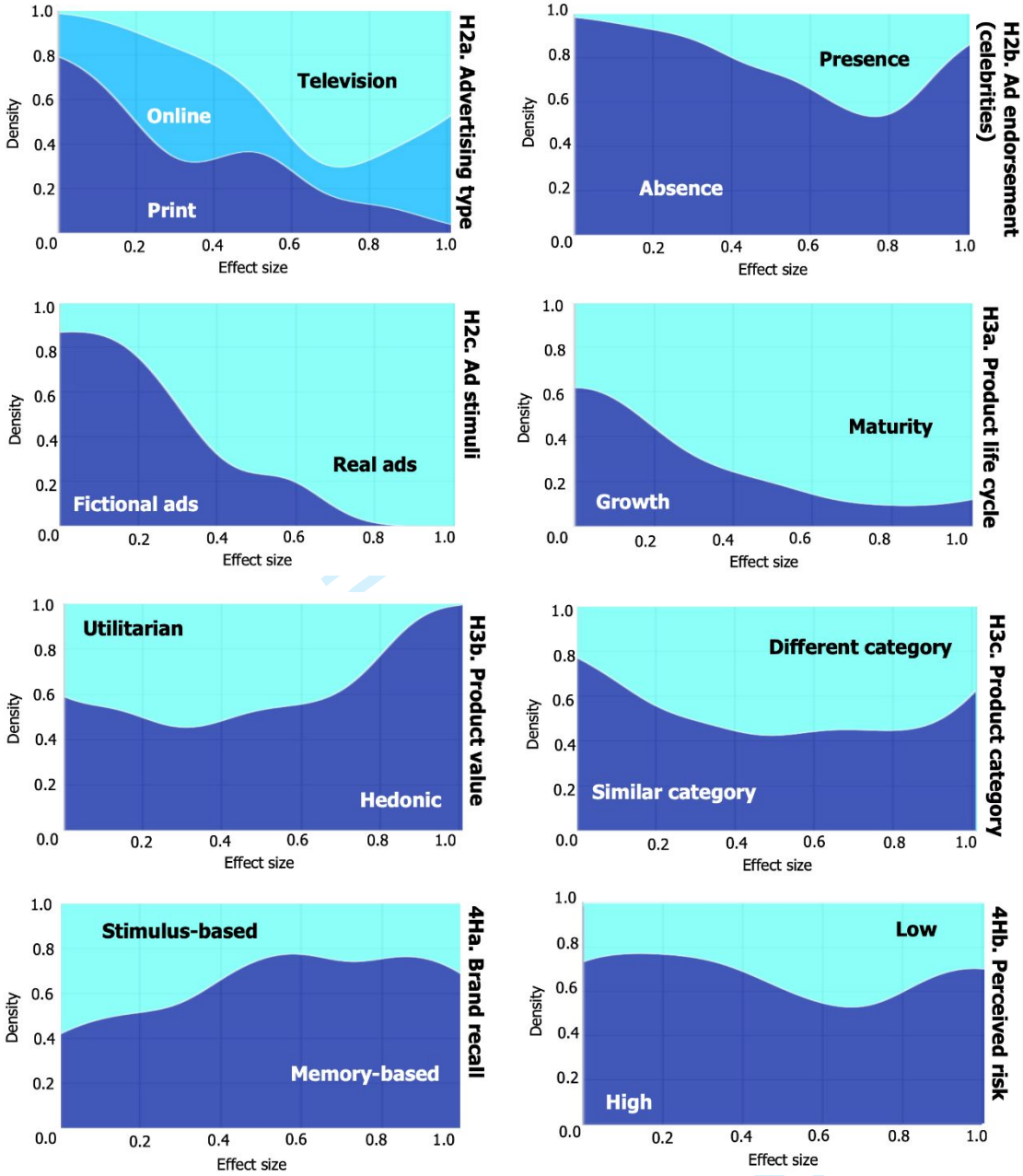

Figure 2b. Density levels of methodological moderators

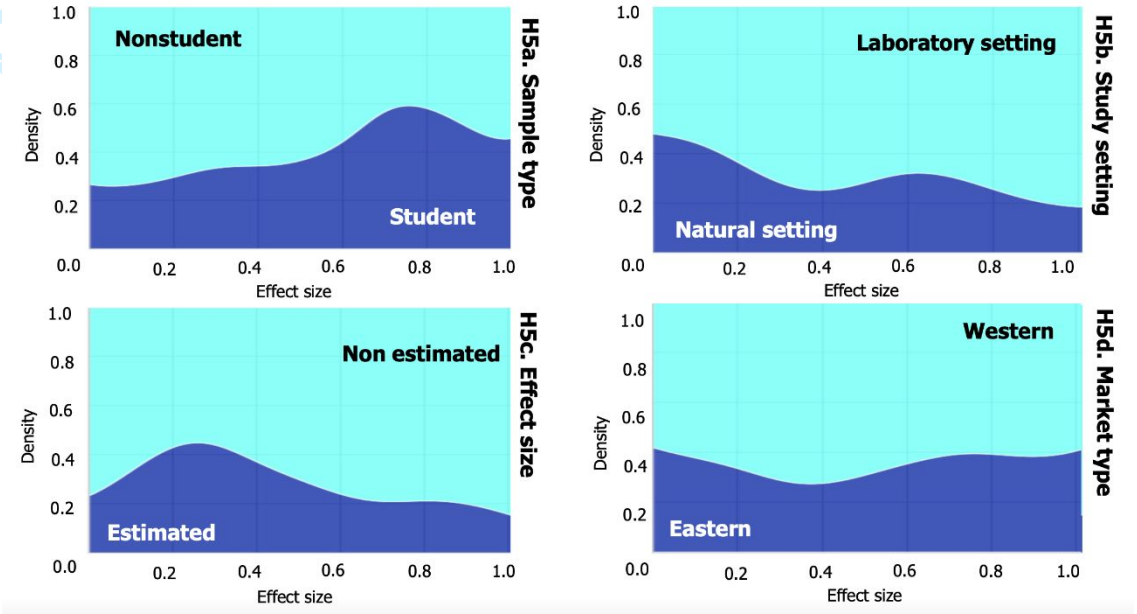

Table 1. Moderator variables used in the meta-analysis

Variables	Description	Coding Procedure
Situational moderators		
Advertising type	Different media channels such as online, print, and television may have different impacts on attitude formation (Havlena *et al.*, 2007).	0 = online 1 = print 2 = television
Brand recall	The dual-process theory of mental processing explains that recall may be memory-based or stimulus-based (Lynch Jr and Srull, 1982). Memory-based recall has stronger impacts on attitude formation (Lee, 2002; Rottenstreich et al., 2006; Sanbonmatsu and Fazio, 1990).	0 = memory-based 1 = stimulus-based
Ad endorsement (celebrities)	Celebrity endorsements promote brand exposure (Friedman and Friedman, 1979).	0 = absence 1 = presence
Ad stimuli	Fictitious ads created in labs have different effects than those observed in real-world advertisements (Eisend, 2009; Nelson *et al*., 2006).	0 = fictitious ad 1 = real ad
Product life cycle	Products have life cycles (Eisend and Stokburger-Sauer, 2013). This research focused on growth stages when advertising is most needed and maturity stages when brands are well-known.	0 = maturity 1 = growth
Product value	Consumers ascribe different values to hedonic and utilitarian products (Eisend and Stokburger-Sauer, 2013).	0 = primarily utilitarian 1 = primarily hedonic
Perceived risk	Consumer attitudes are influenced by perceptions of financial risk associated with brands (Erdem and Swait, 2004).	0 = high risk 1 = low risk
Product Category	Consumers tend to search for similar products and will respond differently to similar versus different product categories (Sanchez, 2004).	0 = similar category 1 = different category
Methodological moderators		
Sample type	Student samples are more homogeneous than nonstudent samples (Eisend, 2017).	0 = student 1 = nonstudent
Study setting	In natural settings, experimenters have less control over extraneous variables, so effect sizes have less explanatory power (Vieira, 2013).	0 = natural setting 1 = laboratory setting
Effect Size	Effect-sizes can be underestimated and have multicollinearity effects (Vieira, 2013).	0 = estimated 1 = non-estimated
Markets type	Western and Eastern cultures show differences in market attitudes.	1 = Western society 2 = Eastern society

Notes: Two independent judges coded the studies based on information provided in the papers.

Table 2. Meta-regression of the moderators

Moderator variable	*Categories*	*ß (r)*	*p-value*	*Result*
Situational moderators: Advertising				
H2a. Advertising type	Intercept	.516	*.000*	*Partially supported*
	Online	1 (.377)		
	Print	-.275 (.216)	*.05*	
	Television	.261 (.611)	*ns*	
H2b. Ad endorsement (celebrities)	Intercept	.543	*.000*	*Supported*
	Absence	1 (.344)		
	Presence	-.253 (.533)	*.001*	
H2c. Ad stimuli	Intercept	.251	*.000*	*Supported*
	Fictional ad	1 (.234)		
	Real ad	.43 (.544)	*.001*	
Situational moderators: Products				
H3a. Product life cycle	Intercept	.348	*.000*	*Supported*
	Growth	1 (.299)		
	Maturity	.246 (.504)	*.001*	
H3b. Product Value	Intercept	.518	*.000*	*Supported*
	Hedonic	1 (.413)		
	Utilitarian	-.134 (345)	*.05*	
H3c. Product category	Intercept	.319	*.000*	*Rejected*
	Similar category	1 (.279)		
	Different category	.266 (.472)	*ns*	
Situational moderators: Brands				
H4a. Brand recall	Intercept	.553	*.000*	*Supported*
	Memory-based	1 (.470)		
	Stimulus-based	-.147 (.352)	*.05*	
H4b. Perceived risk	Intercept	.491	*.000*	*Rejected*
	High	1 (.418)		
	Low	-.077 (.352)	*ns*	
Methodological moderators				
H5a. Sample type	Intercept	.391	*.000*	*Supported*
	Nonstudent	1 (.399)		
	Student	.142 (.533)	*.05*	
H5b. Study setting	Intercept	.536	*.000*	*Supported*
	Natural setting	1(.411)		
	Laboratory setting	.108 (.534)	*.001*	
H5c. Effect Size	Intercept	.436	*.000*	*Supported*
	Estimated	1 (.374)		
	Non estimated	.144 (.456)	*.05*	
H5d. Market type	Intercept	.478	*.000*	*Rejected*
	Western	1 (.378)		
	Eastern	.113 (.448)	*ns*	

Brand Familiarity and Attitude Formation: A Meta-Analysis of Advertising, Product, and Brand Moderators

Abstract

Purpose: This research investigates the effects of brand familiarity on attitude formation across different advertising channels, product types, and brand settings.

Design/methodology/approach: A meta-analysis containing 107 empirical studies with 183 effects sizes tests a theoretical model according to situational moderators and methodological factors of brand familiarity.

Findings: Brand familiarity has stronger positive impacts on attitude formation under particular advertising tools (online and real advertising), product types (hedonic and mature products), and brand characteristics (memory-based recall). The findings also depend on methodological factors such as student samples, laboratory settings, and non-estimated effect sizes.

Originality/value: This meta-analytic study reconciles prior inconsistencies and advances the understanding of brand familiarity across key advertising, product, and brand moderators.

Keywords: attitude formation, brand familiarity, meta-analysis, moderators
Paper type: Research paper

1. Introduction

Building strong brand familiarity is essential for success in competitive markets (Jeong, 2017; Ruiz-Equihua *et al*., 2020; Verhellen *et al*., 2016). Notably, brand familiarity became a recent trending topic in the pandemic context, since 75% of shoppers prefer buying familiar brands in many categories (*Forbes*, 2021a; *Harvard Business Review*, 2019, 2020). Indeed, across platforms, highly familiar brands have enjoyed as much as 23% increased revenues (*Forbes,* 2021b).

In the last 40 years, more than 300 scholarly articles have addressed the managerial and theoretical implications of brand familiarity. A key contribution is the premise that brand familiarity affects the formation of consumer attitudes (Auschaitrakul and Mukherjee, 2017; Boronczyk and Breuer, 2020; Catalán *et al*., 2019; Herédia-Colaço *et al*., 2019; Li *et al*., 2020; Morgan *et al*., 2021). However, these studies demonstrate inconsistent effects of brand familiarity on attitude formation, given its variety of types of advertisements, products, and brand contexts (Auschaitrakul and Mukherjee, 2017; Ilicic and Webster, 2014; Kim *et al.*, 2017; Thomas and Fowler, 2015). The inconsistencies prevent scholars from generalizing about the impacts of brand familiarity (Higgins and Thompson, 2002) and hinders managerial decisions about the best approaches for establishing brand familiarity (Babić Rosario *et al*., 2016; Neumann and Böckenholt, 2014; Vieira, 2013).

To address the gap, this research formed a meta-analytical framework for examining how brand familiarity relates to attitude formation. Advertising tools, product types, and brand contexts are tested as theoretically grounded moderators. The paper further describes meta-analytical procedures and effect sizes of the moderating variables. Finally, this paper provides insights and generalizations that help advance theoretical and conceptual knowledge for brand familiarity research.

2. Brand Familiarity and Attitude Formation

Consumers have direct and indirect experiences through which they acquire *brand familiarity* that allows them to easily recall specific brand names and brand associations (Catalán *et al*., 2019; Copeland and Bhaduri, 2019; Dahlén and Lange, 2004; Davtyan *et al.*, 2021; Delgado-Ballester *et al.*, 2012; Keller, 2003; Lafferty, 2009;

Morgan *et al.*, 2021; Phelps and Hoy, 1996; Van Berlo *et al.*, 2020). Consumers who are highly familiar with brand names tend to form positive associations and attitudes toward brands, but they do not do so in relation to unfamiliar brands (Huang, 2016).

The literature presents two main streams of brand familiarity, as a unidimensional (Baker *et al.*, 1986) or a multidimensional construct (Mitchell, 1982; Krishnan, 1996). The unidimensional brand familiarity construct considers overall information processing (Baker *et al.*, 1986), but the multidimensional construct considers various types of information derived from information searches, advertising effects, customer-provider interactions, repetitive brand use, and word of mouth (Krishnan, 1996; Mitchell, 1982).

Consumers tend to use their experiences as a basis for forming attitudes (Ajzen, 2001; Fazio *et al.*, 2004; Felix and Borges, 2014; Petty *et al.*, 1997; Schmidt and Eisend, 2015). Experiences with familiar brands determine whether they form favorable or unfavorable attitudes, predispositions, evaluations, and decisions about purchasing brands (Boronczyk and Breuer, 2020; Garczarek-Bąk et al., 2021; Kamins and Marks, 1991; Kim *et al.*, 1998; Li *et al.*, 2020; Priester *et al.*, 2004; Van den Berg *et al*., 2006). However, when confronted with unfamiliar brands, their lack of experience will inhibit information processing and attitude formation (Davtyan *et al.*, 2021; Delgado-Ballester *et al.*, 2012, Verhellen *et al.*, 2016), which leads to the first hypothesis:

H1. Brand familiarity positively affects attitude formation.

3. Brand Familiarity Studies: Key Moderators

This study seeks to better understanding the moderating variables involved in brand familiarity-attitude formation. Because studies often report heterogeneous findings (Higgins and Thompson, 2002), meta-analyses are particularly focused on variations in distinct research designs and methods (Aguirre-Rodriguez *et al*., 2012; Babić Rosario *et al*., 2016; Neumann and Böckenholt, 2014; Vieira, 2013) or variations in theoretical constructs (Fern and Monroe, 1996; Morris and DeShon, 2002).

Particularly relevant to this study is the understanding that attitudes are formed by external information sources such as advertising, customer-provider interactions (Felix and Borges, 2014), brand recall (Jeong and Biocca, 2012; Martí-Parreño *et al.*, 2017; Morrin and Ratneshwar, 2000), product-based experiences (Guido *et al.*, 2007;

Hirschman and Holbrook, 1982; Voss *et al.*, 2003), types of media used for advertising (Auschaitrakul and Mukherjee, 2017; Jeong, 2017; Kim *et al*., 2017; Lee *et al*., 2018) and celebrity endorsers (Ilicic and Webster, 2014; Thomas and Fowler, 2015). Consumers tend to form the most favorable attitudes toward well-known brands such as Coca-Cola, Nike, and Apple (Graeff, 2007) in contrast with lesser-known brands (Müller *et al.*, 2013; Sheinin, 2000). Attitudes may depend on whether products serve hedonic or utilitarian purposes or whether products are well established or just beginning to grow. The proposed model of brand familiarity includes situational and methodological moderators to overcome potential heterogeneities across brand familiarity studies (Figure 1).

Insert Figure 1 here

3.1. Situational moderators

Brand familiarity effects depend on situational moderators. For example, consumers will have various levels of brand familiarity when brands are advertised online, through print, or on TV. Brand familiarity also varies depending on whether advertisers use celebrity endorsers, and on whether they feature fictitious or realistic ad stimuli. In terms of products, brand familiarity depends on whether products are in growth versus mature life cycle stages, have hedonic versus utilitarian values, or come from similar (vs. different) product categories. Consumers also form attitudes depending on whether their brand recall comes from memory or advertising stimuli, and whether they perceive high or low risk in using a brand.

3.1.1. Advertising Settings

Prior research on branding suggests that advertising channels cause differing cognitive responses on consumers (Eisend and Küster, 2011; Havlena *et al.*, 2007; Tan and Chia, 2007). For instance, TV commercials may stimulate more senses, reach wider audiences, be more persuasive, and evoke greater recall than print and online advertising (Dijkstra *et al.*, 2005; Draganska *et al.*, 2014; Rodgers and Thorson, 2000), leading to the second hypothesis:

H2a. Advertising channels (online vs. print vs. TV) moderate brand familiarity effects on attitude formation.

Celebrity endorsements have been shown to enrich brand attitudes (Felix and Borges, 2014; Ilicic and Webster, 2014; McCormick, 2016; Silvera and Austad, 2004; Thomas and Fowler, 2015; Till and Shimp, 1998; Spry *et al*., 2011), brand knowledge, and brand image (Ilicic and Webster, 2014; Carrillat *et al*., 2014). Celebrity endorsements are particularly effective for drawing attention and standing out in competitive media spaces (Ilicic and Webster, 2014) when the endorsements are used by highly familiar brands such as L'Oreal, Nivea, and Porsche (Felix and Borges, 2014). Therefore:

H2b. Celebrity endorsement (presence vs. absence) moderates brand familiarity effects on attitude formation.

In the real advertising world, brand familiarity has been shown to reduce the cognitive effort needed to process ads, which then determines brand attitudes (DeLorme and Reid 1999; Eisend, 2009; Kent and Allen 1994; Nelson *et al.*, 2006. In controlled experimental environments, brand unfamiliarity has been shown to generate weak brand attitudes (Nelson *et al.*, 2006; Woltman *et al*., 2004). For instance, an online study divided participants into two groups: one viewed a real Coca-Cola advertisement; the other viewed a fictitious advertisement for Jolt Cola. The real ad was shown to generate the most positive brand attitudes (Mau and Silberer, 2008). In another study, participants expressed positive attitudes toward a real ad for Fanta and less positive attitudes toward fictitious ads for Fungo (Delgado-Ballester *et al*., 2012). Thus, familiarity with well-known brands generates the most positive brand attitudes (Campbell and Keller, 2003), formally hypothesized:

H2c. Ad stimuli (real vs. fictitious) moderates brand familiarity effects on attitude formation.

3.1.2. Product Settings

Brand familiarity effects also depend on product life cycles, product values, and product categories. Products progress through development cycles, beginning with introductory stages, growing to maturity, and then declining (Engelen, *et al*, 2010). Accordingly, consumers will have the strongest familiarity with brands that have gained reputations in their mature stages (Eisend and Stokburger-Sauer, 2013; Babić Rosario, *et al*., 2016), leading to the hypothesis:

H3a. Product life cycle (maturity vs. growth) moderates brand familiarity effects on attitude formation.

Consumers are more likely to value products that bring hedonic benefits over products that bring utilitarian benefits (Dhar and Wertenbroch, 2000). Highly familiar brands that offer hedonic products are most likely to evoke information processing and attitude formation (Babić Rosario *et al.*, 2016; Eisend and Stokburger-Sauer, 2013). Therefore:

H3b. Product value (hedonic vs. utilitarian) moderates brand familiarity effects on attitude formation.

Companies will make different decisions about product development, brand extensions, and product positioning for products in various categories (Viswanathan and Childers, 1999), but they will use similar marketing strategies for similar product categories (Sanchez, 2004). Similar product categories follow the same pattern in evoking similar consumer attitudes, but different categories draw different attitudes (Johnson and Fornell, 1991). More formally:

H3c. Product category (similar, different) moderates brand familiarity effects on attitude formation.

3.1.3. Brand Settings

Consumers recall their associations with familiar brands when they receive stimuli from their memory or from environmental sources such as stores, websites, and advertisements (Lee, 2002). Memory involves immediately compelling and rich affect,

and thus memory-based stimuli evokes strong attitudes (Lee, 2002; Rottenstreich *et al.*, 2006; Sanbonmatsu and Fazio, 1990). In contrast, stimulus-based recall has less effect on emotions, involves less cognitive load, and less conceptual fluency (Lee, 2002; Rottenstreich *et al.*, 2006), leading to the prediction:

H4a. Brand recall (memory-based vs. stimulus based) moderates brand familiarity effects on attitude formation.

In addition, brands are associated with varying perceptions of risk and uncertainties (Erdem and Swait, 2004). Negative attitudes arise from perceptions that brands are highly risky, but positive attitudes arise from perceptions that brands carry tolerable risk (Babić Rosario *et al*., 2016), leading to the hypothesis:

H4b. Perceived risk (high vs. low) moderates brand familiarity effects on attitude formation.

3.2. Methodological moderators

Four methodological moderators were tested in this study: sample type (student, non-student), study setting (natural, laboratory), effect size (estimated, non-estimated) and market type (Western, Eastern). Prior meta-analytical studies suggest that the sample type may cause heterogeneity in effect sizes (Peterson, 2001; Janakiraman *et al*., 2016; Eisend, 2017), such that student samples are usually more homogeneous than nonstudent samples (Fern and Monroe, 1996; Vieira, 2013). Considering that brand familiarity studies have been based on both student and nonstudent samples, this research examines whether:

H5a. Sample type (student, nonstudent) moderates brand familiarity effects on attitude formation.

Study setting also significantly influences effect sizes (Eisend, 2017). In natural settings, researchers lack control over extraneous variables so that effect sizes have reduced explanatory power (Vieira, 2013). In laboratory settings, however, more

homogeneous main effect manipulations are possible, increasing effect sizes (Fern and Moroe, 1996). Thus, this research tested whether:

H5b. Study setting (natural, laboratory) moderates brand familiarity effects on attitude formation.

The effect-size estimation variable might affect meta-analytical results. Estimated effect sizes are usually extracted from primary studies using Beta, regression, t-values, t-test, F-values, and chi-square; non-estimated effect sizes come from Person, Kendal, or Spearman extracted data (Guido *et al.*, 2007). Compared to non-estimated effect sizes, estimated effect sizes can be underestimated and have multicollinearity effects (Guido *et al.*, 2007; Vieira, 2013). In some cases, the classic presentation format in published articles may cause underestimated effects (Vieira, 2013). Therefore, this research tested whether:

H5c. Effect size (estimated, non-estimated) moderates brand familiarity effects on attitude formation.

Consumers in Western and Eastern markets have cultural differences that evoke differing values and attitudes (Ellis, 2006; Hofstede, 1980). Compared with Eastern marketing practices, Western marketers tend to be more competitive and to build strong brand familiarity through advertising (Ellis, 2006; Jiménez and San Martín, 2010; Rosenbloom *et al*., 2012; Supphellen and Grønhaug, 2003). For example, a study comparing Western U.S. consumers with Eastern Russian consumers showed that Americans have the highest levels of brand familiarity (Mikhailitchenko *et al*., 2009). Therefore, this research tested whether:

H5d. Market type (Western, Eastern) moderates brand familiarity effects on attitude formation.

3. Method

Researchers use meta-analyses to integrate conflicting results from academic literature and thus derive a more in-depth understanding of issues (Fern and Monroe,

1996; Lipsey and Wilson, 2001). This meta-analysis included a systematic review following the PRISMA protocol (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) (Moher *et al.*, 2015) with well-grounded meta-analytic recommendations (Rosenthal and Rubin, 1991) and data extraction methods (Rust and Cooil, 1994).

The search for relevant articles of brand familiarity effects on attitude formation in consumer behavior and marketing science used the keywords *brand familiarity, familiar brands*, *familiarity brand scale*, *effect of brand familiarity*, and *impact of brand familiarity*, ranging from 1978 and 2021.

The targeted scientific databases included EBSCO, Elsevier's Science Direct, ProQuest, Emerald, Google Scholar, Jstor, Scielo, Scopus and Taylor & Francis. Theses and dissertations were identified through Google Scholar and ProQuest platforms. The search generated 873 articles, but 589 were rejected because they were theoretical, qualitative, quantitative without providing values for calculated effect sizes, irrelevant, or presented insufficient statistics for use in the regression calculation. Consequently, the meta-analysis includes 286 studies that generated 1,135 observations from a sample of 18,581 respondents; 107 studies and 183 effects sizes specifically tested the relationship between brand familiarity and attitude formation.

Second, following Rust and Cool (1994), this research used a coding procedure focused on moderating factors that influence the relationship between brand familiarity and attitude formation. Two independent coders conducted coding processes. A third coder was available to resolve coding divergences. They identified 107 primary studies. Inter-coder reliability was 92%.

The situational moderators analyzed were advertising channels (online, print, TV), celebrity endorsement (presence, absence), ad stimuli (fictitious, real), product life cycle (maturity, growth), product value (hedonic, utilitarian), product category (similar, different), brand recall (memory-based, stimulus-based), and perceived risk (high, low). In addition, this study tested key methodological factors: sample type (student, non-student), study setting (natural, laboratory), effect size (estimated, non-estimated) and market type (Western, Eastern). Table 1 shows describes the coding procedures.

Insert Table 1 here

The meta-analysis also extracted information for the calculation of effect sizes: sample size, type of sample, collection type, scale index alphas, variance scale indices, statistics for construct relationships, and correlation conversions. Pearson's correlations were corrected by the sample size of each study. When studies failed to present correlation effects, the conversions used standard regressions, Fs, or T-tests following Hedges and Olkin (1985). All effects were calculated by random effect, as per Schmidt and Hunter (1998), because it is more generalizable to studies that have heterogeneous sample sizes (Rosenthal and Rubin, 1991). The correlation transformation was made by Fisher's Z-distribution. The upper and lower confidence interval index was also analyzed at the 95% level, which comprises an estimate of the mean range of corrected weighted correlations (Schmidt and Hunter, 1998). Q and I^2 tests were used to analyze the level of heterogeneity of the direct relationship. Cochran's Q verifies whether the data found in a primary study refute the null hypothesis. If the null hypothesis is confirmed ($p > .05$), the studies are considered homogeneous (Lau *et al.*, 1998). The I^2 statistic is obtained through the Q statistic and can vary from values 0 to 100%. Studies with a 25% index show low heterogeneity; studies with 50% values show moderate heterogeneity; those above 75% show high heterogeneity (Higgins *et al.*, 2003).

4. Results

The weighted mean effect size across all 183 cases was $r = .478$, supporting *H1* (95% confidence interval: low = .433 to high = .581; $p < .001$). Homogeneity analysis revealed a statistically significant Q score of 6,736.38 ($I^2 = 97.3$; $p < .001$), suggesting high heterogeneity in the effect size distribution. High levels of heterogeneity imply that contextual factors might interfere in the relationship between brand familiarity and attitude formation, calling for a formal analysis of the moderating variables (Table 2).

Insert Table 2 here

4.1. Situational Moderators

Situational moderators were advertising types, products, and brands (see Figure 2 for density levels). *H2a* regarding advertising channels was partially supported:

significant differences occurred only for estimates involving print and online advertising ($\beta = .516$; $r_{Online} = .377$; $r_{Print} = .216$; $p < .05$), but not for television advertising ($r_{Television} = .611$; $p = .372$), indicating that brand familiarity effects are stronger for online than for print advertising, perhaps because online channels transfer information more rapidly and generate higher brand recall (Draganska *et al.*, 2014).

Insert Figure 2a here

Ad endorsement (*H2b*) analysis suggested that celebrity endorsement increases the impact of familiarity on attitude formation ($\beta = .409$; $r_{Presence} = .553$; $r_{Absence} = .342$; $p < .001$), as supported by the density graph. The absence of celebrity endorsement is represented by high densities at lower levels of effect sizes. In contrast, the presence of celebrity endorsement is represented by high densities at higher levels of effect sizes. The results indicate that celebrity endorsers increase positive recognition for familiar brands (Thomas and Fowler, 2015), perhaps by increasing visual attention (Ilicic and Webster, 2014).

Ad stimuli (*H2c*) shapes brand familiarity effects: real advertising increases the effects; fictional advertising does not ($\beta = .246$; $r_{Real} = .504$; $r_{Fictional} = .194$; $p < .001$). Density distribution shows that fictitious advertisements have higher density for lower effects, whereas real advertisements have higher density for higher effects, indicating that real advertising strengthens attitude formation and information processing (Delgado-Ballester *et al.*, 2012; Eisend, 2009; Mau and Silberer, 2008; Nelson *et al.*, 2006).

Second, situational moderators regarding product characteristics were tested: product life cycle (*H3a*), product value (*H3b*), and product category (*H3b*). *H3a* is supported by evidence that mature products show greater brand familiarity effects than growth stage products ($\beta = .348$; $r_{Mature} = .504$; $r_{Growth} = .299$; $p < .001$). *H3b* is also supported ($\beta = .518$; $r_{Hedonic} = .413$; $r_{Utilitarian} = .345$; $p < .05$) by indications that familiarity has stronger impacts on attitude formation for hedonic (vs. utilitarian) products, indicating that hedonic products promote stronger brand attitudes. In contrast, *H3c* tests indicate that product category fails to shape brand familiarity effects ($\beta = .319$; $r_{Similar\ category} = .279$; $r_{Different\ categories} = .472$; $p = ns$).

Third, this research tested brand recall (*H4a*) and perceived risk (*H4b*) moderators. *H4a* analysis showed that memory-based recall was stronger than stimulus-based recall for generating brand recall ($\beta = .582$; $r_{Memory\text{-}based} = .472$; $r_{Stimulus\text{-}based} = .341$; $p < .01$). The findings were further reinforced by the fact that memory-based recall had a higher density for larger effect-sizes (Lee, 2002; Rottenstreich *et al.*, 2006). However, *H4b* test indicated that perceived risk ($\beta^{af} = .491$; $r^{af}_{High} = .352$; $r^{af}_{Low} = .345$; $p = ns$) failed to moderate brand familiarity effects.

4.2. Methodological Moderators

Three hypotheses were supported regarding the methodological moderators of brand familiarity effects. *H5a* (sample type) shows that student samples have stronger brand familiarity effects than nonstudent samples ($r_{Student} = .533$; $r_{Nonstudent} = .399$; $p < .001$), suggesting that student samples are more homogeneous and yield stronger effect sizes (Eisend, 2017; Fern and Monroe, 1996). Investigation of *H5b* (study setting) demonstrated that laboratory settings are more likely than natural studies to indicate strong brand familiarity effects ($r_{Laboratory\ setting} = .534$; $r_{Natural\ setting} = .411$; $p < .001$), probably because researchers in natural settings lack control over extraneous variables and the effect sizes have less explanatory power (Eisend, 2017).

Overall, investigation of *H5c* (effect size estimation) showed that the non-estimated rather than estimated effect sizes had the greater brand familiarity effects ($r_{Non\text{-}estimated} = .456$; $r_{Estimated} = .374$; $p < .05$), which aligns with previous meta-analytical research showing that effect sizes are often underestimated and have multicollinearity effects (Vieira, 2013). Finally, market type (*H5d*) indicated nonsignificant differences in brand familiarity effects ($r_{Western} = .378$; $r_{Eastern} = .448$; $p = ns$). Figure 2b shows density levels for each methodological moderator.

Insert Figure 2b here

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5. Discussion

This meta-analytical research combines several primary studies to synthesize effects related to brand familiarity and attitude formation. Brand familiarity is a critical

factor determining how consumers form attitudes toward brands (Martí-Parreño *et al.*, 2017). This research demonstrates that primary studies of brand familiarity have highly heterogeneous discrepancies in effect sizes, indicating a need for a meta-analysis to clarify findings (Fern and Monroe, 1996; Higgins and Thompson, 2002). Thus, this meta-analytical study consolidates, integrates, and reconciles research on brand familiarity effects on consumer attitude formation (Auschaitrakul *et al.*, 2017; Dessart, 2018; Morgan *et al.*, 2021). The proposed model evaluates variations in effect sizes across several studies, offering guidance for academic researchers and managerial decision-makers.

5.1 Academic and Managerial Implications

This research advances academic knowledge about brand familiarity effects on attitude formation. By drawing more generalizable conclusions from studies conducted in retail, online, and television contexts, the study makes several contributions to academic studies of brand familiarity and brand management.

First, this research identifies important situational and methodological moderators that determine brand familiarity effects and contribute to several literatures. This study empirically demonstrates that brand familiarity effects depend on situational circumstances such as advertising channels, celebrity endorsers, advertisement content, and brand recall. Television advertising has been assumed to be the advertising channel that generates the most positive cognitive responses (Eisend and Küster, 2011; Li and Lo, 2015), but this meta-analysis suggests that online advertising is more effective for generating brand familiarity. By doing so, this research adds to the brand familiarity literature regarding advertising in online environments (Van Berlo *et al*., 2020; Catalán *et al*., 2019; Davtyan *et al*., 2021; Verhellen *et al*., 2016) by finding that consumers form the strongest brand attitudes when they gain brand familiarity through online advertising and memory-based brand recall.

Memory-based recall stimulates more affect, cognitive load, and conceptual fluency, and is thus more powerful than stimulus-based recall for generating brand familiarity effects. In addition, the findings indicate that celebrity endorsers increase brand familiarity effects and cognitive processing (Felix and Borges, 2014; Ilicic and Webster, 2014). Thus, contributing to brand communication literature (Halder *et al*.,

2021), this study shows that when real brands use celebrity endorsers, consumers form more positive brand attitudes toward familiar brands.

Second, direct and indirect experiences strongly affect attitude formation (Kim *et al.*, 1998). Product life cycle and product value also moderate brand familiarity effects. This research shows that consumers form more positive brand attitudes toward products that are in mature rather than growing life cycles and that are used for hedonic rather than utilitarian purposes, adding to consumer-brand relationship and brand familiarity literature (e.g., Morgan *et al.*, 2021). In addition, as expected, real rather than fictitious advertisements require less cognitive effort, evoke fewer risk perceptions, and generate the strongest brand familiarity (DeLorme and Reid 1999; Nelson *et al*., 2006).

Third, regarding methodology and aligned with recent meta-analytical studies, findings indicate that studies performed with student samples, in laboratory settings, and with non-estimated effect sizes tend to find the strongest brand familiarity effects. Therefore, this meta-analysis extends seminal work by testing the methodological factors that shape variations in the relationship between brand familiarity and attitude formation.

In practical terms, the findings also provide recommendations for managers and marketers who want to increase affective or cognitive consumer connections with brands. Recommended strategies for enhancing brand familiarity include the use of online advertising, celebrity endorsements, and advertising campaigns that use realistic appeals. For example, consumers who are highly familiar with a brand will respond more favorably to a photo (real ad) rather than a drawing of a product.

5.2 Directions for Further Research and Limitations

Future research could help researchers and practitioners by examining other moderators that influence attitude formation. Several key moderators that could influence brand familiarity effects were not tested in this meta-analysis due to the limited number of studies: perceived brand globalness versus localness, corporate social responsibility (CSR actions), deliberate versus incidental attention, and cognitive versus affective brand evaluations. Such factors – perceived globalness, CSR actions, deliberate attention, affective evaluations – could boost brand familiarity effects on attitude formation. New meta-analytical reviews and new experimental studies should expand the testing of these moderators.

In addition, future studies should deepen the understanding of brand familiarity effects in contemporary marketing contexts, such as: sharing economy and social media platforms, brand familiarity post-COVID, and the role of Artificial Intelligence (AI) in brand familiarity. These contexts might shape brand familiarity, since sharing economy platforms and social media contexts might foster stronger customer-brand relationships. In addition, post-pandemic contexts, combined with the rise of AI, might increase customers' preference for well-known brands, avoiding additional risks and ensuring their personal data is secure.

Finally, this research has limitations inherent to the use of meta-analytical procedures. The nonsignificant findings for some of our variables (e.g., market types and perceived risk) show that those variables fail to affect brand familiarity and should be considered when generalizing meta-analytic findings. Also, future studies should integrate qualitative and quantitative methods to provide empirical generalizations. This integration should aim to generate alternative construct definitions and measures of brand familiarity (e.g., multidimensional measures), expanding its scope. Finally, additional studies should account for other variables found in the brand familiarity literature, such as brand recognition, brand recall, brand association, brand identification, brand experience, and brand memory. Further studies should be more inclusive and account for these factors.

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Figure 1. Theoretical model of brand familiarity and attitude formation

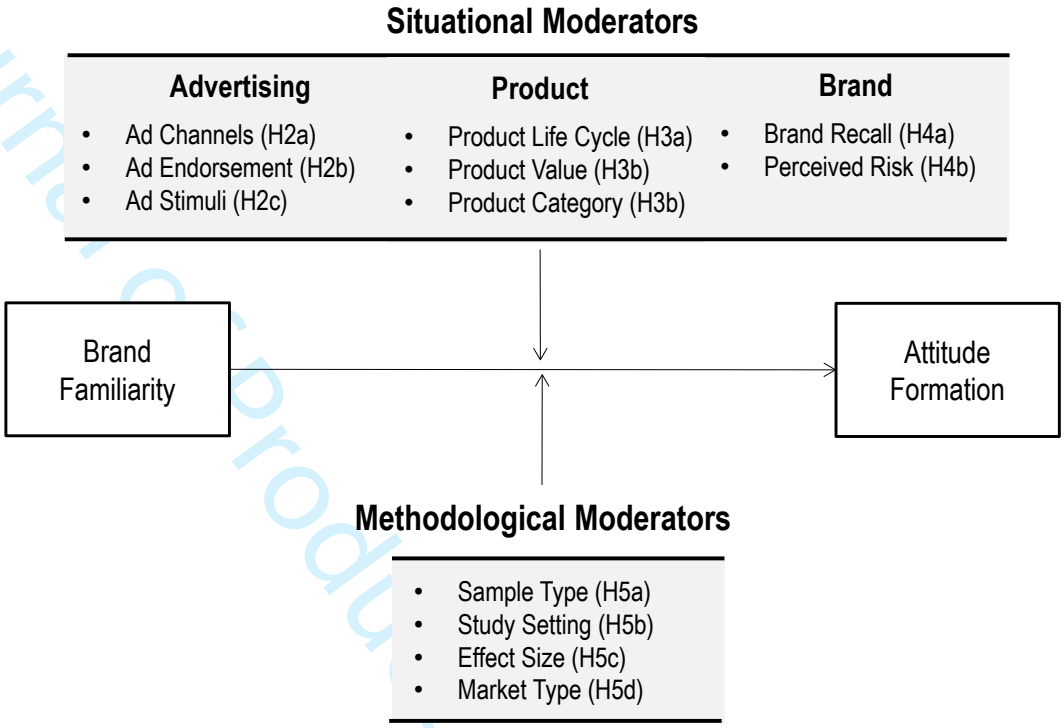

Figure 2a. Density levels of situational moderators

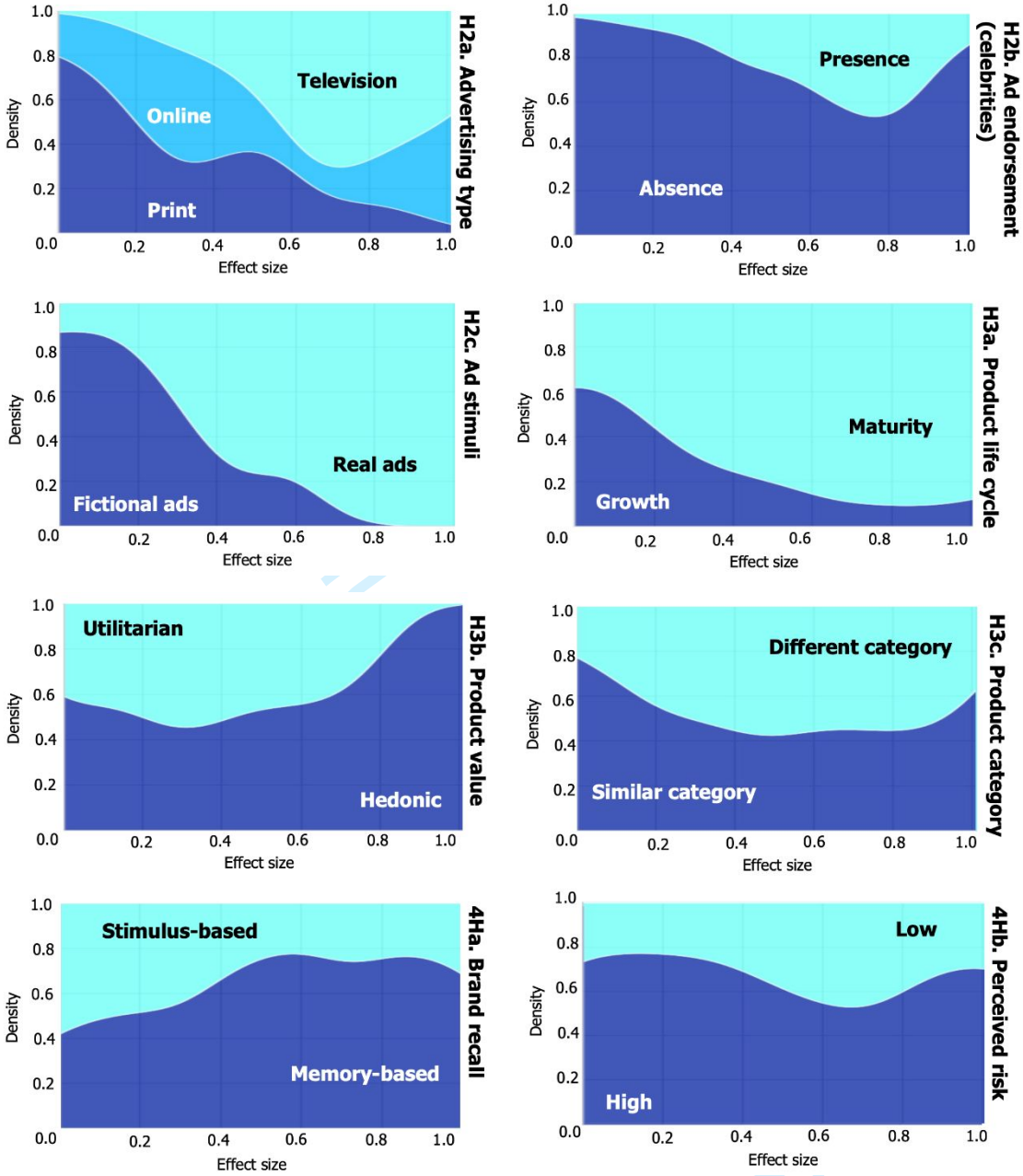

Figure 2b. Density levels of methodological moderators

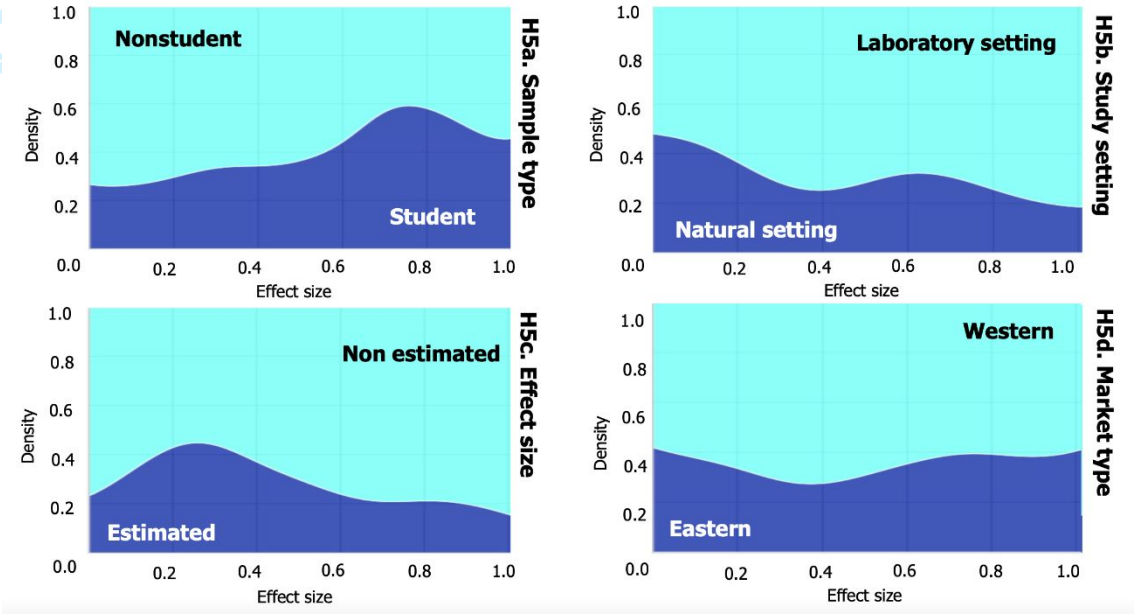

Table 1. Moderator variables used in the meta-analysis

Variables	Description	Coding Procedure
Situational moderators		
Advertising type	Different media channels such as online, print, and television may have different impacts on attitude formation (Havlena *et al.*, 2007).	0 = online 1 = print 2 = television
Brand recall	The dual-process theory of mental processing explains that recall may be memory-based or stimulus-based (Lynch Jr and Srull, 1982). Memory-based recall has stronger impacts on attitude formation (Lee, 2002; Rottenstreich et al., 2006; Sanbonmatsu and Fazio, 1990).	0 = memory-based 1 = stimulus-based
Ad endorsement (celebrities)	Celebrity endorsements promote brand exposure (Friedman and Friedman, 1979).	0 = absence 1 = presence
Ad stimuli	Fictitious ads created in labs have different effects than those observed in real-world advertisements (Eisend, 2009; Nelson *et al*., 2006).	0 = fictitious ad 1 = real ad
Product life cycle	Products have life cycles (Eisend and Stokburger-Sauer, 2013). This research focused on growth stages when advertising is most needed and maturity stages when brands are well-known.	0 = maturity 1 = growth
Product value	Consumers ascribe different values to hedonic and utilitarian products (Eisend and Stokburger-Sauer, 2013).	0 = primarily utilitarian 1 = primarily hedonic
Perceived risk	Consumer attitudes are influenced by perceptions of financial risk associated with brands (Erdem and Swait, 2004).	0 = high risk 1 = low risk
Product Category	Consumers tend to search for similar products and will respond differently to similar versus different product categories (Sanchez, 2004).	0 = similar category 1 = different category
Methodological moderators		
Sample type	Student samples are more homogeneous than nonstudent samples (Eisend, 2017).	0 = student 1 = nonstudent
Study setting	In natural settings, experimenters have less control over extraneous variables, so effect sizes have less explanatory power (Vieira, 2013).	0 = natural setting 1 = laboratory setting
Effect Size	Effect-sizes can be underestimated and have multicollinearity effects (Vieira, 2013).	0 = estimated 1 = non-estimated
Markets type	Western and Eastern cultures show differences in market attitudes.	1 = Western society 2 = Eastern society

Notes: Two independent judges coded the studies based on information provided in the papers.

Table 2. Meta-regression of the moderators

Moderator variable	*Categories*	*ß (r)*	*p-value*	*Result*
Situational moderators: Advertising				
H2a. Advertising type	Intercept	.516	*.000*	*Partially supported*
	Online	1 (.377)		
	Print	-.275 (.216)	*.05*	
	Television	.261 (.611)	*ns*	
H2b. Ad endorsement (celebrities)	Intercept	.543	*.000*	*Supported*
	Absence	1 (.344)		
	Presence	-.253 (.533)	*.001*	
H2c. Ad stimuli	Intercept	.251	*.000*	*Supported*
	Fictional ad	1 (.234)		
	Real ad	.43 (.544)	*.001*	
Situational moderators: Products				
H3a. Product life cycle	Intercept	.348	*.000*	*Supported*
	Growth	1 (.299)		
	Maturity	.246 (.504)	*.001*	
H3b. Product Value	Intercept	.518	*.000*	*Supported*
	Hedonic	1 (.413)		
	Utilitarian	-.134 (345)	*.05*	
H3c. Product category	Intercept	.319	*.000*	*Rejected*
	Similar category	1 (.279)		
	Different category	.266 (.472)	*ns*	
Situational moderators: Brands				
H4a. Brand recall	Intercept	.553	*.000*	*Supported*
	Memory-based	1 (.470)		
	Stimulus-based	-.147 (.352)	*.05*	
H4b. Perceived risk	Intercept	.491	*.000*	*Rejected*
	High	1 (.418)		
	Low	-.077 (.352)	*ns*	
Methodological moderators				
H5a. Sample type	Intercept	.391	*.000*	*Supported*
	Nonstudent	1 (.399)		
	Student	.142 (.533)	*.05*	
H5b. Study setting	Intercept	.536	*.000*	*Supported*
	Natural setting	1(.411)		
	Laboratory setting	.108 (.534)	*.001*	
H5c. Effect Size	Intercept	.436	*.000*	*Supported*
	Estimated	1 (.374)		
	Non estimated	.144 (.456)	*.05*	
H5d. Market type	Intercept	.478	*.000*	*Rejected*
	Western	1 (.378)		
	Eastern	.113 (.448)	*ns*	