The impact of brand gender on brand equity
Findings from a large-scale cross-cultural study in ten countries

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Abstract
Purpose – The purpose of this paper is to examine the influence of brand gender on brand equity across countries and cultures in various product domains.

Design/methodology/approach – Consumers from ten countries on four continents rated 20 global brands, leading to a total of 16,934 cross-clustered observations. Linear mixed effect models examined a series of nested models, testing three novel brand gender effects with respect to the impact of androgynous brands on brand equity and the moderating role of consumers’ biological sex as well as individualistic and collectivistic cultures. Additional robustness tests provide support on form, metric, and scalar invariance of the measurements and the robustness of the observed effects across countries and cultures.

Findings – The current research reveals that androgynous brands generate higher brand equity relative to exclusively masculine, exclusively feminine, and undifferentiated brands. The authors also show a brand gender congruence effect such that male consumers value masculine brands higher than females while female consumers value more feminine brands higher than males. Finally, highly masculine brands generate higher brand equity in more individualistic countries whereas highly feminine brands generate higher brand equity in more collectivistic countries.

Originality/value – This is the first research examining and demonstrating the positive influence of androgynous brand gender perceptions on brand equity. To the best of the authors’ knowledge, this is also the first paper examining brand gender effects across countries and cultures.

Keywords Marketing, Brand equity, Androgyny, Brand personality, Brand gender, Global branding

Paper type Research paper

Introduction
Brands are companies’ most valuable assets (Aaker, 1991; Kapferer, 2012). To position their brands successfully, companies often aim at associating their brands with either more masculine or feminine personality attributes (e.g. Grohmann, 2009). This strong positioning of a brand as either exclusively masculine or as exclusively feminine can have positive implications for consumer attitudes toward a focal brand, consumers’ future purchase intentions, and ultimately a brand’s equity (Grohmann, 2009; Lieven et al., 2014; van Tilburg et al., 2015). The latter has been conceptualized more generally as the incremental value that a branded product or service provides relative to an unbranded counterpart (Keller, 1993). Specifically, brand equity has been defined as “a set of assets and liabilities linked to a brand, its name and symbol, that adds to or subtracts from the value provided by a product or service to a firm and/or to that firm’s customers” (Aaker, 1991, p. 15), with high convergence of both financial and consumer based brand equity (Christodoulides and de Chernatony, 2010).

Consumer based brand equity has been of increasing interest in both recent academic research as well as a strategic indicator that is monitored in current business practice (Agarwal and Rao, 1996; Christodoulides and de Chernatony, 2010). Most importantly,
prior work of Grohmann (2009) has shown that consumer based brand equity is strongly affected by whether brands are positioned as more masculine or more feminine. While Grohmann’s research was conducted with samples of brands and consumers in the USA, similar findings have been reported recently for a variety of brands across various product domains in Germany (Lieven et al., 2014, 2015). However, three observations emerge from this prior work: first, prior work has primarily examined and discussed the main effect findings such that more masculine and more feminine brands generate a larger brand equity. Yet, the past decades of research on gender schemata has provided evidence that androgynous individuals who possess both masculine as well as feminine traits tend to generate a variety of positive effects such as a high degree of adaptability in both interpersonal and impersonal situations (e.g. possessing masculine traits such as being assertive and instrumental while also possessing feminine traits such as being compassionate and expressive; Bem, 1977). Interestingly, not only has this stream of research shown the positive consequences for androgynous individuals themselves but that more androgynous individuals were even perceived as both more attractive as well as having a higher occupational success (Jackson, 1983). Thus, apart from the main effect dominance in prior work on brand gender effects, it will be illusive to examine whether even more androgynous brands (i.e. ones that possess both highly masculine and highly feminine traits) generate an equally high brand equity relative to their counterparts possessing only one strong brand gender positioning. Second, a central question is whether any brand gender effects on brand equity are conditional on a person’s biological sex. Given that a person’s biological sex is easily accessible for both the individual herself and also external observers it will be important both theoretically as well as practically to assess how consumers’ biological sex moderates the influence of brand gender perceptions on a brand’s equity. While prior work has shown that a more masculine or feminine brand gender is more positively valued if it matches an individuals’ gender role (i.e. the cultural and social norms that are associated with a biological sex; Grohmann, 2009), these gender roles are typically unobservable from the outside (i.e. whether a female or male consumer actually perceives herself or himself as actually more or less feminine or masculine) and were found to be less effective to predict, for example, consumers’ shopping behavior or leisure activities (see Palan, 2001 for a review). Thus, the current work will examine how consumers’ biological sex (instead of consumers’ “psychological sex” or gender role) may affect consumers’ brand gender perceptions on brand equity. Finally, almost all prior work on brand gender effects has been conducted with smaller samples in a single country. These countries stemmed typically from Western, more individualistic cultures. This seemingly minor fact may have an influence on the consistency of previous brand gender effects across countries that stem from less individualistic cultures. Specifically, prior work has shown that while more individualistic cultures have a tendency to value more assertive aspects of personality, more collectivistic cultures tend to be drawn toward less assertive but more communal aspects of an individuals’ personality that foster mutual agreement and sensitivity (Harris et al., 1994; Triandis, 1997, 2001). Thus, it is likely that cultural influences may even reverse some of the prior findings on predominantly masculine or predominantly feminine brand characteristics dependent on cultural norms.

Thus, the key objective of the current research is to provide answers on these emerging questions based on prior work on gender schemata and the role of androgynous brands, the role of consumers’ own biological sex in their brand perceptions, and how cultural differences affect the desirability of certain brand gender traits (e.g. communal values in collectivistic cultures vs self-centered values in more individualistic cultures).
The findings and contributions of the current research are threefold. First, we provide evidence from a sample involving consumers from ten countries across four continents with a total of more than 16,000 observations that androgynous brands generate higher brand equity relative to exclusively masculine, exclusively feminine, and undifferentiated brands. This advances both prior work on brand gender effects and bridges the gap between research on brand gender and prior research on gender schemata that has highlighted the positive consequences of androgyny perceptions. Second, we propose and show a brand gender congruence effect such that male consumers value masculine brands higher than females while female consumers value more feminine brands higher than males. Thus, beyond prior work discussing consumers’ gender roles (i.e. the cultural norms associated with a biological sex) in recent brand equity research (e.g. Grohmann, 2009; Lieven et al., 2014; Palan, 2001), the current research establishes a more general (and more accessible) link between consumers’ biological sex and how it moderates the influence of brand gender perceptions on brand equity. This has important implications for firms as consumers’ biological sex is observable while gender roles are not. Third, this is the first research showing that highly masculine brands generate higher brand equity in more individualistic countries whereas highly feminine brands generate higher brand equity in more collectivistic countries. This has important theoretical implications for both prior work on brand gender effects and cross-cultural marketing in general. Specifically, by integrating prior work on the cross-cultural differences in people’s evaluation of certain personality traits (e.g. a more positive evaluation of communal-oriented personality traits in collectivistic cultures relative to individualistic cultures) the current research reveals a theoretically and practically important reversal of consumers’ evaluation of a brand’s equity.

In what follows, we develop three focal hypotheses on the role of androgyny in brand gender perceptions, the role of differential brand gender perceptions of male and female consumers, and the moderating role of cultures that are more individualistic or collectivistic. Next, we test our predictions with a cross-national sample involving consumers from ten countries on four continents across a variety of brands and product domains, and discuss the theoretical and managerial implications of the findings for both single-culture and cross-cultural marketing.

**Theoretical background and hypotheses**

Research on gender schemata over the past decades has put forward a new concept in masculinity and femininity research: the central proposition is that women and men can possess similar characteristics. This today seemingly negligible nuance was apparently a controversial proposition for the long tradition of gender schemata research on masculinity and femininity (Bem, 1974). The androgyny concept emerged as a synthesis of the Greek *andros* (man) and *gyne* (woman). The central notion is that characteristics that are stereotypically associated with masculinity (e.g. to be assertive and adventurous) do not restrict the same individual to be equally likely to possess characteristics that are stereotypically associated with femininity (e.g. to be sensitive and caring). Thus, androgyny reflects the assumption that both masculine and feminine traits can co-exist rather than being exclusive.

While this conceptualization and refusal of a simplistic dichotomization of gender effects along a bipolar continuum of masculinity vs femininity has fueled decades of past gender schemata research, recent work on brand gender effects seems more limited. However, already Grohmann (2009) and others (see also Gough, 1957) have proposed that any unidimensional bipolar gender scale falls short of capturing a potential independence
among masculine and feminine traits. That is, any narrowly defined gender identity along a unidimensional conceptualization of gender may self-restrict and stereotype the actual reality of individuals and also the consequences for consumer brand perceptions. In Grohmann’s (2009) work on brand gender effects, she already highlights the independence of the masculine and feminine brand personalities, leading to four categories (or quadrants in a two-dimensional space) of either highly masculine brands, highly feminine brands, neither highly masculine nor feminine (i.e. undifferentiated) brands, and androgynous brands that are both highly masculine and highly feminine. However, the predominant discussion in this prior work resonates along the importance of either an exclusively masculine brand gender or an exclusively feminine brand gender positioning (see also Lieven et al., 2014) but not a positioning of both a high masculine as well as a high feminine positioning of a brand. Part of the reason was highlighted by Grohmann (2009) herself such that the type of brands that were examined were capturing the extremes of the masculine and feminine brand gender distributions.

This limitation is interesting given the work on the positive consequences of possessing an androgyneous personality. For example, Katz (1986) noted that androgyne is associated with multiple advantages such as a high adaptability to ambiguous contexts. Similarly, already Bem (1974) has shown in her classic work on the sex role inventory, that a non-androgyneous (i.e. either exclusively masculine or exclusively feminine) sex role restricts a person’s range of behaviors as he or she moves from one situation to another. This is contrary to highly sex typed individuals who keep themselves consistent with an internalized sex role standard and suppress any behavior that might be considered undesirable. In a recent study, Campbell (2011) has even shown that entrepreneurs with both feminine and masculine personality traits tend to be more successful in their business life's (see also Way and Marques’, 2013; finding on highly effective androgyneous leadership styles). Critically, Jackson (1983) has shown that these positive consequences of a greater adaptability of androgyneous traits are not restricted toward the individual who possesses these traits her- or himself but it also affects how others view this person. Specifically, she found that others judge more androgyneous individuals as more positively relative to exclusively masculine or exclusively feminine individuals. Based on the social perception model of Snyder and Swann (1978), Jackson has proposed and shown that others tend to like androgyneous individuals consistently more, attribute greater occupational success toward them and find them even equally effective as highly masculine counterparts on dimensions such as an individuals’ instrumentality (Jackson, 1983). Thus, while more assertive individuals tend to be considered more effective and instrumental, they are simultaneously perceived as less likable. However, this negative connotation is not observed for androgyneous individuals that are still perceived as assertive (a stereotypical masculine trait) but also, for example, as more sensitive (a stereotypical feminine trait) leading to a greater likability relative to exclusively masculine or exclusively feminine individuals.

The positive implications of androgyne from the perception of others have also been discussed in the context of contemporary culture and trends. For example, the success of Jimi Hendrix, the Beatles, or Elvis Presley, albeit their competence as musicians, has also been attributed to their challenge of gender stereotypes and their tendency to position themselves as more androgyneous rather than exclusively masculine or feminine, which ultimately created an appeal to both females and males (e.g. Jimi Hendrix wearing high-heeled boots or the long hair and androgyneous dress of the Beatles; see Kemp, 1985 for a discussion). This more androgyneous positioning was also quoted as a dominant driver of success in consumer fashion markets for brands such as Armani, Pierre Cardin,
Ralph Lauren, or Calvin Klein (Markham and Cangelosi, 1999). Based on this theorized appeal of the androgyny concept, we predict that androgynous brands will generate a higher brand equity than exclusively masculine, exclusively feminine, or undifferentiated brands. More formally, we propose:

\[ H1. \] Androgynous brands (i.e. brands that are perceived as both highly masculine and highly feminine) generate a higher brand equity relative to (a) highly masculine (but less feminine), (b) highly feminine (but less masculine), and (c) undifferentiated brands (less masculine and less feminine).

One readily accessible and observable dimension of an individual is one’s biological sex (Blanz, 1999; Dion et al., 1972). This accessibility has led to a stream of research that found an effect that is today known as the “same sex bias,” i.e. a fast recognition and processing of stimuli that correspond to one’s own sex. While neuroimaging studies have revealed that adults (typically heterosexual males) have a preference to view opposite-sex faces (Fischer et al., 2004), nevertheless individuals tend to process opposite and same sex stimuli similarly fast (Macrae and Martin, 2007). This preferential processing of gendered stimuli that match one’s own biological sex may also have implications on how female and male consumers value a brand and their attitudes toward them. Traditionally, feminine gender traits comprise more relational personality traits, such as caring and understanding. For example, femininity is associated with interdependence, integration and a more communal orientation (Palan et al., 1999). In contrast, masculinity is, among other traits, more strongly related to independence and assertiveness. Given the plethora of prior work on same sex biases (e.g. see Alreck et al., 1982), showing that individuals tend to like objects that match individuals’ own sex, recent work has shown that consumers also prefer brands with gender characteristics that match their own biological sex (Vitz and Johnston, 1965; Whipple and Courtney, 1985; Worth et al., 1992). Similarly, also Grohmann (2009) has shown that more masculine or feminine brands are liked more, trusted more, and generate a greater likelihood to buy the brand if it matches a consumers’ gender role. However, such gender roles are not observable for outsiders and part of an individual’s self-concept. This makes prior work less accessible and applicable. Thus, both from a theoretical as well as a practical perspective, it will be elusive to examine whether even consumers’ biological sex may moderate the influence of brand gender perceptions on a brand’s equity. Thus, we predict a brand gender congruence effect such that male participants exposed to a masculine brand (i.e. scoring high on items such as brave, daring, or adventurous) will rate this brand’s equity higher relative to female consumers. Similarly, we predict that female consumers will evaluate the brand equity of feminine brands (i.e. scoring high on items such as sensitive, tender, or sweet) higher than male consumers. Thus, we propose that:

\[ H2. \] Male (female) consumers perceive a masculine (feminine) brand’s equity higher than female (male) consumers.

Finally, an important question is whether these previously proposed brand gender effects are consistent across cultures. A classic finding in prior work on cross-cultural differences is that East Asian individuals are more collectively oriented, accentuating strong communal values and high social interdependencies, thereby emphasizing group affiliation (see Markus and Kitayama, 1991 for a discussion). Likewise, this prior research has also shown that individuals from Western cultures tend to value independence of the self and striving for freedom and personal success substantially higher than individuals from more collectivistic countries. Interestingly, these seemingly different cultural values also denote typical differences of gender roles. As Eagly (1995) has proposed in her
work and review on sex differences, independence and assertiveness are strongly related to masculinity. On the contrary, relational values and interdependence are strongly associated with higher levels of femininity. Thus, countries that are more individualistic (typically associated with Western countries) tend to value masculine traits higher than countries that have a tendency to be more collectively oriented (typically associated with Eastern countries). As a consequence, we propose that masculine brands (i.e. brands with more assertive traits) are valued higher in individualistic cultures whereas feminine brands (i.e. brands with more communal traits such as caring, sensitive, or graceful) are valued higher in more collectivistic cultures. Thus, we propose:

\[ H3. \] Highly masculine (feminine) brands in individualistic (collectivistic) countries generate a higher brand equity relative to masculine (feminine) brands in collectivistic (individualistic) countries.

In what follows, we test these propositions of differential brand gender effects (i.e. the influence of androgyny on brand equity, and the moderating role of consumers’ biological sex, and individualistic vs collectivistic cultures) with a cross-cultural sample in ten countries.

**Empirical study**

**Study design and procedure**

To test our hypotheses, a total of 3,049 consumers were recruited by a professional market research agency across ten countries and four continents. In each country, participants were presented a total of 20 brands across eight product categories at the beginning of the study. The brands for this study were chosen carefully and conditional on their presence in each of the ten countries (informed by the 2010 EquiTrend scores and the market research agency supporting the data collection). The brands used in the current study were the following: Ford, Mercedes, and Toyota (cars); Dove, Gillette, L’Oréal, Maybelline, Nivea, and Olay (cosmetics); Ferrero (sweets); Nike (apparel); Samsung and Sony (electronics); Coca-Cola and Heineken (beverages); Apple and Google (IT); and American Express, Disney, and Hilton (service organizations)[1].

To ensure the data quality of the study and to prevent consumer ratings for even unknown brands, participants chose those brands they know (at least one brand to participate in the study; Dolnicar and Rossiter, 2008) and rated each of them along their perceived brand gender and brand equity dimensions (see measurement section below for details). This resulted in a total of 5.6 (SD = 5.1) rated brands per participant, and a total of 16,934 cross-clustered observations used in this study. All surveys were identical across countries and conducted online. The original English versions were used in Australia, India, and the USA. For the seven other countries, we used a professional language editing service to translate the survey (including multiple iterations to ensure the content validity of the measurement items). Table I provides a summary of the sample characteristics across countries.

**Measurement**

Brand gender was measured according to Grohmann (2009). The masculine brand personality (MBP) was measured by the following items: adventurous, aggressive, brave, daring, dominant, sturdy, with high scale consistency (\( \alpha_{\text{MBP}} = 0.87; \text{AVE} = 0.58 \)). The feminine brand personality (FBP) was measured by: expresses tender feelings, fragile, graceful, sensitive, sweet, and tender (\( \alpha_{\text{FBP}} = 0.92; \text{AVE} = 0.70 \)). All items were measured on nine-point Likert scales ranging from 1 = “not at all” to 9 = “fully applies.”
Brand equity was measured based on consumers’ perception of brand equity (not financial based brand equity; yet, both tend to covary, see Christodoulides and de Chernatony, 2010). We measured consumer based brand equity according to Brady et al. (2008) with five items. The model was previously used by Voorhees et al. (2006). The items were derived from Rust et al. (2000) and were based on definitions of brand equity by Aaker (1991) and Keller (1998). This brand equity scale was found to be sufficiently reliable (0.86, Voorhees et al., 2006; 0.84, Brady et al., 2008) and valid (AVE = 0.55, Voorhees et al., 2006). The scale items were (all measured on nine-point Likert scales) “not at all loyal” to “very loyal,” “negative attitude” to “positive attitude,” “negative image” to “positive image,” “low quality” to “high quality,” and acceptance of a greater willingness to pay with “definitely not” to “definitely” ($\alpha_{\text{BrandEquity}} = 0.90$; AVE = 0.75). At the end of the study, participants indicated their age (in years) and biological sex (dummy coded as 0 = female and 1 = male).

To test whether individualistic (collectivistic) cultures tend to rate masculine (feminine) brands higher on brand equity relative to collectivistic (individualistic) cultures (see $H_3$), we used Hofstede et al.’s (2010) IDV index (see Table I) as a moderating variable in the following analyses (see also Cannon et al., 2010 for a similar procedure).

To avoid any spurious effects due to country-specific response styles, we z-standardized the measures prior to all analyses (see Fischer, 2004 for a discussion). Table II summarizes the measurement characteristics and scale consistency measures across countries.

### Results

To test our hypotheses, we estimated a linear mixed effects model with a random intercept to control for multiple observations per individual. To provide a systematic test of our hypotheses and to provide a baseline relative to previous research, we gradually increased the model complexity. Specifically, we tested each nested model when adding the hypothesized effects of $H_1$ (androgyne, i.e. simultaneously high masculine and high feminine brand gender), $H_2$ (brand gender perceptions of female and male consumers), and $H_3$ (brand gender effects conditioned by individualistic vs collectivistic cultures) relative to the previous, less complex model as a reference. Table III provides a summary of results.

As a baseline result replicating prior work of Grohmann (2009) and Lieven et al. (2014), Model 1 provides convergent evidence that an increase in masculinity ($\beta_{MBP} = 0.430$, $p < 0.001$) and an increase in femininity of a brand ($\beta_{FBP} = 0.442$, $p < 0.001$) increase a
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brand’s equity. Although not hypothesized, male consumers rated a brand’s equity significantly lower relative to female consumers ($\beta_{\text{Female vs Male}} = -0.056, \ p < 0.001$).

The main effect of individualistic vs collectivistic cultures had no significant influence on a brand’s equity ($\beta_{\text{IDV}} = -0.003, \ p = 0.780$).

Model 2 increases the complexity of the main effects model by adding the interaction effect of MBP and FBP ($H1$) to examine the impact of androgynous brands on brand equity as well as the brand gender (MBP and FBP) × participant sex interactions ($H2$). The more complex model significantly improved the model fit relative to the main effects model ($\chi^2 (3) = 23.07, \ p < 0.001$). In support of $H1$, androgynous brands (as indicated by a significant MBP×FBP interaction) had a significant influence on brand equity above and beyond the two main effects of MBP and FBP ($\beta_{\text{MBP×FBP}} = 0.022, \ p < 0.01$). To illustrate this result, we tested the four gender quadrants (i.e. see Grohmann, 2009) against each other using an ANOVA. To categorize the continuous data, we specified the set of brands formally as follows: androgynous brands = (FBP < $m$) × (MBP > $m$), masculine brands = (FBP < $m$) × (MBP > $m$), feminine brands = (FBP > $m$) × (MBP < $m$), undifferentiated brands = (FBP < $m$) × (MBP < $m$) with $m$ defined as the sample median. As shown in Figure 1, androgynous brands generated a significantly higher brand equity relative to both highly masculine and highly feminine brands as well as undifferentiated brands, supporting $H1$(a-c) ($F(3, 16,930) = 1,729.645, \ p < 0.001$). Thus, although both MBP and FBP increase a brand’s equity individually, their interaction (i.e. brands that integrate both masculine and feminine traits) generates a higher brand equity relative to the main effect estimates.

In line with $H2$, we find support for our theorizing of a brand gender congruency effect dependent on consumers’ biological sex. That is, male consumers perceived a brand’s equity higher for masculine but not feminine brands and vice versa ($\beta_{\text{MBP×Male} vs \text{Female}} = 0.064, \ p < 0.001; \ \beta_{\text{FBP×Male} vs \text{Female}} = -0.011, \ p = 0.326$). To illustrate this finding, Figure 2 shows the results of a simple slopes analysis (Aiken and West, 1991) and reveals the distinct reversal of a greater brand equity for more masculine brands evaluated by male consumers relative to a greater brand
equity for more feminine brands when evaluated by female consumers. The sequence of brand equities rated by male respondents was 0.88 for androgynous brands, 0.00 for masculine, −0.21 for feminine, and −1.00 for undifferentiated brands. The respective sequence for female consumers was 0.88 for androgynous brands, 0.11 for
feminine, −0.09 for masculine, and −0.77 for undifferentiated brands. Thus, undifferentiated brands are valued lowest and androgynous are valued highest irrespective of female or male consumers. A discussion of whether this result is consistent with participant’s gender identity (i.e., the attitudes and feelings that a given culture associates with an individuals’ biological sex) is discussed in the General Discussion section more extensively.

Adding the individualistic vs collectivistic × brand gender interaction effects significantly improved the model fit as shown in Model 3 (tested against Model 2; \( \chi^2 = 106.42, p < 0.001 \)). In line with H3, and as illustrated in Figure 3, we find that highly masculine brands tend to generate larger brand equity in individualistic relative to collectivistic countries (\( \beta_{MBP \times IDV} = 0.099, p < 0.001 \)) while highly feminine brands generate larger brand equity in more collectivistic relative to individualistic countries (\( \beta_{FBP \times IDV} = -0.025, p < 0.05 \)). Importantly, the previous model results are consistent and robust even after controlling for the additional interaction effects and remain significant. The sequence of brand equities rated by respondents from individualistic countries was 0.95 for androgynous brands, 0.07 for masculine, −0.18 for feminine, and −0.96 for undifferentiated brands. The respective sequence for consumers from collectivistic countries was 0.81 for androgynous brands, 0.08 for feminine, −0.17 for masculine, and −0.80 for undifferentiated brands. Again, androgynous brands were valued the highest and undifferentiated brands were valued the lowest irrespective of individualistic or collectivistic tendencies. Finally, as an un hypothesized side-result, we find that male consumers from individualistic countries value a brand’s equity more negatively (−0.28 vs 0.19, \( p < 0.001 \)).

![Figure 3.](image-url)

**Figure 3.**
The influence of individualism and collectivism on brand equity of masculine and feminine brands.
Robustness tests
We conducted a series of statistical robustness tests to examine whether the previously reported results suffer from either a violation of measurement invariance or a common method bias. The following two subsections provide a summary of these robustness tests.

Due to potentially different response styles across countries, cross-country comparisons can suffer from measurement variance, i.e. a rejection of the invariance or measurement equivalence assumption (Steenkamp and Baumgartner, 1998). To examine a potential invariance violation, we specified a multi group structural equation model with countries as groups and conducted three statistical tests. First, form invariance was tested by fitting the indices of a model with all ten countries specified as groups. Second, metric invariance was tested by constraining the factor loadings to be equal across all countries. Third, scalar invariance was tested by additionally constraining the intercepts to be equal across countries (see Cheung and Rensvold, 2000).

The three tests were conducted based on the z-standardized data. Tests 1 and 2 support both form invariance (SRMR = 0.0610, CFI = 0.957, TLI = 0.939; RMSEA = 0.024, \( p_{\text{close}} = 1.000 \)) and metric invariance (SRMR = 0.0789, CFI = 0.945, TLI = 0.931, \( \Delta \text{TLI} < 0.05 \), RMSEA = 0.025, \( p_{\text{close}} = 1.000 \)). In addition, the differences in the fit indices testing scalar invariance were not significant (SRMR = 0.0789, CFI = 0.946, TLI = 0.940, \( \Delta \text{TLI} < 0.05 \), RMSEA = 0.023, \( p_{\text{close}} = 1.000 \)). Thus, the assumption of measurement invariance was not rejected, providing support for the consistency of measurements and robustness of results across countries.

A second set of follow-up analyses addressed potential biases resulting from the data collection method. Both the brand gender and brand equity scores were assessed in a single survey that was completed by the same respondents. Thus, there is a risk of common method variance (Podsakoff et al., 2003). We conducted a series of tests following Williams et al. (2010) to examine a potential common method bias. Specifically, we used respondents’ age as a marker variable given its independence with respect to the predictor and criterion variables. These analyses revealed the same substantive results testing different model configurations, yielding only slightly varying parameter estimates and insignificant \( \chi^2 \) difference tests, suggesting that the current results are robust across countries (details available upon request).

General discussion
Theoretical implications
The current research has examined the influence of brand gender on brand equity across ten countries on four continents. The theoretical implications of this research are threefold. First, this is the first empirical study testing brand gender effects across countries and cultures. A central finding of the current research is that androgynous brands generate higher brand equity than either exclusively masculine or exclusively feminine brands. This finding extends prior work (e.g. Grohmann, 2009; Lieven et al., 2014) by showing that brands can be convincingly aggressive and dominant but sensitive and fragile at the same time, with positive implications for a brand’s equity. Although Grohmann (2009) and others (e.g. Lieven et al., 2014) also examined androgynous brand gender effects, they highlighted that the sample of brands that have been investigated in prior work consisted of brands that were either highly feminine or highly masculine, inhibiting any effect of potential androgynous brand positioning (see Grohmann, 2009, p. 109). Besides advancing prior work on brand gender effects, the current work also bridges the gap between research on brand gender and prior research on gender schemata that has highlighted the positive consequences
of androgyny perceptions. Second, we provide consistent evidence for a brand gender congruence effect such that highly feminine brands generate larger brand equity among female consumers and masculine brands generate larger brand equity among male consumers. This extends prior work examining gender roles (i.e. the cultural and social norms that are associated with a biological sex) in brand gender perceptions and highlights that even consumers’ biological sex produces similar effects and even hold in cross-cultural settings. Third, this is the first study showing that brand gender effects also vary by culture. Specifically, while more masculine brands generate larger brand equity in individualistic countries, feminine brands tend to generate larger brand equity in collectivistic countries. This finding contributes to recent work on cross-cultural gender identity schemata, showing that individualistic cultures rate the pursuit of individualistic goals, achievement, and separation of the self from others higher than collectivistic cultures, while more collectivistic cultures rate the pursuit of more integrative, communal goals higher with a strong emphasis on the contextual implications of a decision (Chen et al., 1998; Triandis et al., 1990). Finally, from a methodological perspective, we also show that the current set of results do not violate assumptions of form, metric, or scalar invariance, which are important prerequisites for a generalization of the current results across countries.

Managerial implications
A key question for brand managers of globally operating brands is how to manage these brands in different countries effectively (Solberg, 2002). The main issue is the tension between tailoring a brand toward local markets vs international standardization. The findings of this research have important implications for both alternatives. On one hand, the current set of results suggest that customizing a brand’s gender toward a targeted market (or culture) can be beneficial for companies. Specifically, the findings show that brands benefit from positioning a brand to be more masculine in individualistic countries and more feminine in collectivistic countries. Yet, tailoring a brand toward specific cultures is likely to involve both a greater complexity for brand managers and also costs. On the other hand however, androgynous brands generate similarly high brand equity across all countries and thus, an androgynous brand positioning could be a key concept for a successful international standardization strategy (Solberg, 2002). This releases brand managers from the dilemma of striving a balance to fit a brand’s positioning to culturally dependent preferences of either more masculine traits in individualistic countries or more feminine traits in collectivistic countries. Building a brand’s positioning around both masculine and FBP traits tends to be more successful than narrowly focussing on maximizing exclusively masculine or exclusively FBP traits. The success of androgynous brands such as Calvin Klein, Apple, or Disney is, at least partly, suggestive in that androgynous brands may not decrease but rather increase a brand’s equity across countries and cultures.

However, instead of a pure dichotomy of either a fully customized or fully standardized brand positioning toward each culture or country, companies may balance both strategies dependent on the strength of a country’s individualistic vs collectivistic tendencies. For those countries that are overly collectivistic or overly individualistic, it can be more beneficial to remain (or even converge toward) a more extreme masculine brand positioning (in individualistic countries) or more extreme feminine brand positioning (in collectivistic countries) but to standardize the brand’s positioning in those countries at intermediate levels of individualism and collectivism. The fact that many companies tend to standardize a brand either globally or, for example, based on a simplistic dichotomy
such as Western vs Eastern countries but eventually generate less beneficial results across markets (De Bellis et al., 2015) suggests that alternative approaches are worth examining. It is noteworthy that only a very small fraction of countries are at the extremes of being either highly individualistic (e.g. USA, Australia) or highly collectivistic (e.g. China), and most countries range in the intermediate region of the IDV scale (e.g. Brazil, India, France to Sweden, ranging between around 40 and 70). Thus, it might be more beneficial for globally operating companies to apply hybrid approaches based on the extremes of a country’s individualistic vs collectivistic tendencies and to balance exclusive masculine or feminine vs androgynous brand positioning strategies.

Beyond traditional marketing communication to represent a brand such as a brand’s logo, advertising campaigns, among others, brand managers may strategically use a richer set of stimuli to allow a situational accentuation of preferred brand personality traits to attract specific consumer segments. For example, the use of Apple’s more stringent, masculine in-store design is mirrored by specific scripts for sales representatives that reflect arguably more feminine attributes (which have been explicitly taught in Apple’s sales trainings) such as a “personalized warm welcome,” “ending with a fond farewell,” and “emotional reassurance and understanding” of technicians (Kane and Sherr, 2011). Thus, brand managers may not only use tailored advertising campaigns but can also build on other stimuli that represent a brand (e.g. such as in-store design, costumes of sales representatives, or even specific scripts for sales representatives as in the Apple example) to effectively highlight preferred brand gender traits.

An interesting observation for practitioners and brand strategists is also that no brand out of the sample of 20 brands in this study was feminine in some countries and masculine in others. They were either feminine in some countries, androgynous or undifferentiated in other countries, or masculine in some countries, but androgynous or undifferentiated in other countries. The strongest brands were never undifferentiated in any country. Disney was perceived more feminine in four countries (Australia, France, Japan, and Sweden) and androgynous in the other six countries. Apple was perceived more masculine in five countries (Australia, Germany, France, Sweden, and the USA) and androgynous in the other countries. Thus, companies may first examine their overall brand positioning and then tailor any opposite gender perceptions for some target markets if needed. Yet, despite these observations, the crucial managerial implication is to avoid brands being undifferentiated at all. The number of countries where brands were undifferentiated was highly negatively correlated with the brand’s equity ($r = -0.786, p < 0.001$). For example, Heineken and Hilton (both undifferentiated in six countries), and American Express (in seven countries), were ranked 17th, 18th, and 20th on brand equity out of the total of all 20 brands in the current research.

**Limitations and future research**

Collecting data across a large number of countries and cultures comes at an expense. Although many iterations with a professional language editing company aimed at minimizing any differences in consumers’ understanding of measurement items and questions, we cannot rule out that both language driven differences between countries as well as social norms within those countries may affected the current set of results. One noteworthy observation is that three items had particularly small factor loadings. Specifically, the masculine item “aggressive” had a generally low overall loading across almost all countries ($M_\lambda = 0.52$). The masculine item “dominant” had a particularly low factor loading in China ($\lambda = 0.18$) and Japan ($\lambda = 0.42$) while the feminine item “fragile” scored also low in Japan ($\lambda = 0.27$). Thus, while aggressiveness does not seem to reflect
the masculinity dimension of brands well independent of a country, we see that some items tend to vary by country. It will be crucial for follow-up work to test the consistency of these potentially problematic measurement items and whether the reasons for these low factor loadings are simply driven by translation issues or whether the content validity of the items differs predictably between countries (e.g. some items are likely to be more socially desirable in some countries than others such as a generally low social desirability of being dominant and aggressive in Japan relative to Western countries such as Germany or the USA; Hofstede, 1980). Yet, it is noteworthy that the current set of results are unaffected by these moderate differences as all models were also estimated by using a reduced set of items with constrained factor loadings (> 0.7), producing the same substantive results. However, more exploratory techniques and item reduction procedures could be applied in follow-up work to examine the consistency of the scale (see also Azar, 2013).

Finally, we see three important avenues for future research. First, although we find a consistent moderation effect for consumers’ biological sex, it will be important to test whether these effects hold even after controlling for consumers’ salient gender identity (i.e. the attitudes and feelings that are associated with an individuals’ biological sex). This will be particularly interesting as gender identity (but not biological sex) may vary situationally and can be primed externally (e.g. accentuated or diminished; Steele and Ambady, 2006). Second, given the consistent positive effect of androgynous brands on brand equity, it would be interesting to examine the consequences of brand gender repositioning strategies of companies. For example, will a highly masculine brand that highlights additional feminine traits perform equally or less well than a feminine brand that highlights additional masculine traits? Finally, extending the previous thought, are the respective brand gender attributes independent or do they covary, leading to either complementary or suppressor effects for certain traits? For example, a brand that is perceived both adventurous and compassionate may cause positive complementary effects such that the compassion and caring for others is typically an integral part of an adventure that is experienced together. On the contrary, being perceived as compassionate but aggressive may inhibit (or even reverse) any positive associations of compassion at all. Providing answers on these questions will be important for both single-culture as well as cross-cultural research on brand gender effects.

Note
1. Olaz was used in Germany instead of Olay.

References


Further reading


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