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The roles of consumer ethnocentrism, animosity, and cosmopolitanism in sponsorship effects

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The Roles of Consumer Ethnocentrism, Animosity, and Cosmopolitanism in Sponsorship Effects

Dr. Richard Lee and Dr. Marc Mazodier

Abstract

Purpose
Using latent growth modelling (LGM) to disentangle the static and dynamic components of brand affect and brand trust, this longitudinal study examines the impacts of consumer ethnocentrism, animosity, and cosmopolitanism on the effects of sponsorships on brand affect and brand trust.

Design/Methodology
An online panel of U.K. participants reported their perceptions of a French sponsor at three successive points (before, during, and at the end of the 2012 London Olympics). Of the 903 respondents at T1, 694 remained at T2 (76.8%) and 577 (63.9%) remained at T3. Another 302 respondents only at T3 controlled for potential mere measurement effects. The data were analysed using LGM techniques.

Findings
Due to sponsorship effects, brand affect and brand trust increased linearly over time. However, consumer ethnocentrism and animosity negatively moderated these increases. Cosmopolitanism enhanced brand affect but not brand trust.
**Research Implications**

As market globalisation exposes foreign firms to potential backlash from consumer nationalistic orientations toward their products, sponsorship strategies must consider the interplay between these nationalistic sentiments and sponsorship effects. While foreign sponsors are typically preoccupied with determining the fit between their brand and a local event, they must also consider individual-level nationalistic sentiments. The success of companies in foreign markets depends on creating favourable country-directed consumer attitudes.

**Originality/Value**

Beyond demonstrating the application of LGM to individual-level longitudinal analyses, this study extends sponsorship research by considering a previously unexplored area with key academic and managerial contributions, namely, the role of consumer nationalism in sponsorship effects. The strategic uses and outcomes of international sponsorship must be considered in conjunction with consumers’ perceptions of foreign brands from a nationalistic perspective.

**Classification**

Research paper

**Keywords:**

Sponsorship, latent growth modelling, consumer ethnocentrism, cosmopolitanism, animosity.
1. Introduction

The worldwide sponsorship market has reached $51.1 billion in 2012, including $2.18 billion related to the London 2012 Olympics (International Events Group, 2014; The Guardian, 2012). The increase in sponsorship activities reflects the growing awareness that sponsorship can enhance audiences’ recall of (Woisetschläger and Michaelis, 2012) and attitudes and behaviour toward (Olson and Thjømøe, 2009) a sponsoring company or brand.

Consequently, extensive research has attempted to predict individual differences in the brand effects of sponsorship (for a review, see Cornwell, 2008). Yet the research stream seemingly has overlooked socio-psychological variables related to consumer nationalism, particularly ethnocentrism, animosity, and cosmopolitanism. This research gap appears critical as foreign brands often use sponsorships to influence global consumer segments across cultures (Meenaghan and Shipley, 1999) or target new local markets (Geng et al., 2002). Therefore, accounting for cross-national factors in sponsorship research is necessary in order to better understand the effectiveness of sponsorship activities, which may work differently from country to country (Ruth and Simonin, 2003). As Cleveland et al. (2009; 2011) contend, unabated globalisation has heightened the importance of considering consumer nationalism across countries, and marketing success depends on harmonising product attributes with these nationalistic attitudes.

This study examines the roles of consumer ethnocentrism, animosity, and cosmopolitanism on the effects of sponsorships on brand affect and brand trust. The studied concepts and relationships emerge from sponsorship and international marketing literature separately, and have never been melded into a model to explain the roles of cross-country variables on sponsorship effects. Sponsorship literature recognises the potential effects from merely associating a sponsor with its country-of-origin (Moon and Jain, 2002; Ruth and Simonin, 2003). Separately, country-of-origin (COO) studies have expounded the importance
of consumer ethnocentrism, animosity and cosmopolitanism (Balabanis and Diamantopoulos, 2004; Steenkamp and de Jong, 2010). However, sponsorship research have thus far failed to link these cross-national variables directly to sponsorships effects. Further, the effects of consumer nationalism are particularly pertinent with sport sponsorship as rivalry among sports fans is well documented, often to the extent of creating negative sponsorship effects (Bergkvist, 2012; Reisinger et al., 2006). As sport events heighten a sense of common social identity among fellow nationals and increase animosity toward another country, this may lead to a bias against products from the country (Bilkey and Nes, 1982).

In this longitudinal study of an actual sponsorship in a sporting event, we examine two key sponsorship outcomes, brand affect and brand trust toward the sponsoring brand. We use latent growth modelling (LGM) to disentangle the static (initial state) and dynamic (change) components of brand affect and brand trust over three successive occasions (before, during, and at the end of the 2012 London Olympics) in relation to a major sponsorship by Électricité de France (EDF). Then we seek to elucidate how three cross-national variables—consumer ethnocentrism, animosity, and cosmopolitanism—may influence the dynamic changes in brand affect and brand trust because of the sponsorship.

This study offers both academic and managerial contributions. Although Cornwell et al. (2005) have alluded to the importance of social identification factors for determining sponsorship effects, no studies have examined the roles of cross-national variables (ethnocentrism, animosity, and cosmopolitanism) in sponsorship effects. Another key contribution is the use of longitudinal data at the individual, rather than aggregate, level. As Woisetschlager and Michaelis (2012) lament, most sponsorship studies use either cross-sectional or longitudinal data with different respondents over time.

This study’s findings in turn have actionable implications for sponsors that need to identify appropriate events to maximise their corporate objectives. Because consumer
ethnocentrism, animosity, and cosmopolitanism depend on the focal foreign country, the success of sponsorship strategies in a target local market rests on whether they reflect an accurate understanding of the interplay between these nationalistic sentiments and sponsorship effects. Hence, managers should consider cross-country factors as segmentation criteria for developing targeted sponsorship strategies.

2. **Research framework and hypotheses**

Sponsorship involves a brand’s investment in an event, person, or idea, for the purpose of exploiting the commercial potential of this association (Meenaghan, 1983). Its presumed benefits stem from the notion that associating with an event results in the transfer of positive knowledge from the sponsored entity to the sponsoring brand (Gwinner and Eaton, 1999). In light of globalisation, sponsorship poses pivotal challenges for companies in foreign markets. Consumers inherently possess nationalistic persuasions to varying degrees that may see them favouring products from their own countries (Shimp and Sharma, 1987), biasing against products from particular foreign countries (Klein *et al.*, 1998), or adopting open mindsets towards products regardless of their country-of-origin (Cannon and Yaprak, 2002). Consequently, these country-directed consumer attitudes are critical factors in determining the success of companies in foreign markets (Reed *et al.*, 2012; Riefler and Diamantopoulos, 2007).

In the next section, we review key concepts from the sponsorship and international marketing literature to build our conceptual model of the roles of cross-national variables in sponsorship effects. With this theoretical foundation, we formulate a set of hypotheses that describe the relationships among the model constructs.

2.1 **Impacts of sponsorship on brand affect and brand trust**
Brand affect and brand trust are key drivers of brand commitment and loyalty (Chaudhuri and Holbrook, 2001). Following Chaudhuri and Holbrook (2001), we define brand affect as the positive emotions toward a brand, and brand trust as consumers’ expectations about the brand’s reliability in a risky situation or willingness to rely on the brand to perform its stated functions. Studies have shown that sponsorship can improve a sponsor’s brand affect and brand trust (Mazodier and Merunka, 2012; Olson and Thjømøe, 2012).

Extensive literature has drawn on different theoretical mechanisms to explain sponsorship effects (Cornwell, 2008). Among the identified key persuasion processes, the transfer model theory asserts that affect, meaning or associations transfer from an event to its sponsors through their simultaneous presentation during the event (Gwinner and Eaton, 1999; Keller, 2003). Hence, the more consumers like a sponsored event, the more they engender positive affect toward the sponsoring brands.

Attribution theory, another explanation of sponsorship persuasion, posits that humans cognitively attribute behaviour as either self-serving or altruistic (Dean, 2003). Consumers attribute sponsorship behaviour similarly, thus influencing the perceptions of sponsorship; preliminary evidence shows that these perceptions can lead to outcomes, including attractiveness, trust, identification, and ultimately purchase behaviour (Rifon et al., 2004). Meenaghan (2001) suggests that attribution theory relates to goodwill effect, where sponsorship first generates goodwill among consumers before positively shaping their attitudes toward the sponsors. This halo of goodwill stems from individuals appreciating and recognising the benefits of sponsorship to activities with which they are involved.

Both transfer model and goodwill-effect theories contend that sponsorship can improve brand affect. But none of these models can elucidate the relationship between sponsorship-linked marketing and the rate of brand affect improvement. Campbell and Keller
(2003) show that brand affect increases linearly with message repetition for familiar brands, although their experimental study focuses on television and Internet advertising rather than sponsorship. We hypothesise:

\[ H_1: \text{Over time and at the individual level, consumers’ brand affect increases linearly as a result of sponsorship-linked marketing.} \]

Chaudhuri and Holbrook (2001) argue that brand trust depends on the brand’s demonstrated ability to perform its stated functions. We draw on signalling theory (Inman, 1995) to explain the impact of sponsorship on brand trust. The theory asserts that in the absence of observable evidence about a brand, consumers use extrinsic cues to develop perceptions about the brand (Kirmani and Rao, 2000). With sponsorship, consumers may derive their beliefs about sponsors from event-specific characteristics. For example, global events such as the Olympics cost billions to stage, so an Olympics sponsorship may signal the sponsor’s global and successful stature, which then cue favourable brand-related characteristics, such as quality and trustworthiness. Signalling theory may thus explain the impact of sponsorship on brand trust.

Meaning transfer may also explain this effect. Related to Heider’s (1958) balance theory, the model claims that people seek a balanced state in their lives. Consequently, to avoid inconsistencies within their beliefs, they align their liking for a sponsor or an event with their trust for the sponsored brand. Indeed, Gwinner and Eaton (1999) show that image dimensions, such as sincerity, can transfer from property to sponsor. Mazodier and Merunka (2012) find that sponsorship has a positive influence on brand trust, but their quasi-experimental design and use of a convenience sample represent limitations that require replications in other conditions. Thus, we hypothesise:
H$_2$: Over time and at the individual level, consumers’ brand trust increases linearly as a result of sponsorship-linked marketing.

2.2 Consumer ethnocentrism and sponsorship effects

Despite the unabated pace of globalisation, consumer ethnocentrism remains a barrier to foreign markets (Kwak et al., 2006). Shimp and Sharma (1987, p. 280) defined consumer ethnocentrism as the beliefs about “the appropriateness, indeed morality, of purchasing foreign-made products” because purchasing foreign products harms the domestic economy, leads to job losses, and hurts fellow countrymen. Ethnocentrism increases the proclivity to favour one’s country or culture and a disdain for foreign countries or cultures (Shimp and Sharma, 1987). Even when domestic alternatives are unavailable, ethnocentric consumers would rather choose products from culturally similar than dissimilar, countries (Watson and Wright, 2000).

Ethnocentric consumers may also perceive foreign advertisements negatively (Kwak et al., 2006; Reardon et al., 2005). Sponsorship research shows that an event with a foreign sponsor tends to be evaluated less favourably than an event with a domestic sponsor, which may then engender negative attitudes toward the sponsor according to the transfer model (Ruth and Simonin, 2003; Yue et al., 2014). Therefore, the presence of foreign brands in a sponsored event invokes ethnocentric feelings among local consumers, which may dampen sponsorship goodwill and other positive sponsorship outcomes. Hence:

H$_3$: Consumer ethnocentrism decreases the rate of improvement in (a) brand affect and (b) brand trust brought about sponsorship-linked marketing.
2.3 Cosmopolitanism and sponsorship effects

The sociological concept of cosmopolitanism is often attributed to Merton (1957), who distinguishes locals from cosmopolitans, who orientate themselves beyond their local provincial confines to participate in an expanded society. Extending from sociology, marketing researchers present cosmopolitan consumers as open-minded world citizens, whose consumption orientation transcends any particular cultural setting (Cannon and Yaprak, 2002; Riefler and Diamantopoulos, 2009). Cosmopolitan consumers’ desire to experience culturally diverse products arises from their open-mindedness to cultural differences (Riefler et al., 2012; Skrbis et al., 2004). This desire also enhances attitudes toward global advertising (Zhou and Belk, 2004). An open mindset implies a propensity to accept new ideas, which can mitigate potential fallout from negative perceptions of foreign advertisements (Kwak et al., 2006).

Drawing on these findings, we posit that cosmopolitanism has a positive impact on sponsorship effects. As cosmopolitan consumers tend to make objective product evaluations, regardless of a product’s country-of-origin (Cannon and Yaprak, 2002), sponsorship messages become an information source that facilitates consumers’ evaluations of the sponsoring brand. Sponsorship-linked communication activities invariably portray the sponsored brands in a positive light.

Further, consumer ethnocentrism and cosmopolitanism may be viewed as opposite ends of a continuum (Yoon et al., 1997). Reed et al. (2012; also see Steenkamp and de Jong, 2010) contend that local and global consumer cultures exist in consumers' minds as distinct mental frames that once activated may manifest behaviour consistent with the activated frame. By rejecting an ethnocentric view that biases against foreign products, cosmopolitan consumers may thus adopt a global consumption culture (Riefler et al., 2012). Therefore, just as hypothesis H₃ surmises that consumer ethnocentrism possesses a negative moderating effect on brand trust and affect, we expect that:
H₄: Cosmopolitanism increases the rate of improvement in (a) brand affect and (b) brand trust brought about sponsorship-linked marketing.

2.4 Animosity and sponsorship effects

While globalisation brings forth economic and social benefits, it can also create tensions between countries, such as through trade protectionism and individual resentment (Segal-Horn, 2002). Klein et al. (1998) defined consumer animosity as the remnants of antipathy arising from previous or ongoing military, political or economic conflicts, and demonstrated empirically that consumer ethnocentrism and animosity are distinct. Unlike ethnocentric consumers, who are biased against all foreign products, consumers with high animosity direct their disfavour solely at a particular country’s products (see review by Riefler and Diamantopoulos, 2007). When consumers carry these negative attitudes and stereotypes in their minds, they may then respond negatively to international marketing communication involving the foreign country (Moon and Jain, 2002; Yue et al., 2013). For example, Li and Shooshtari (2006) recount Toyota’s misstep in China by showing an advertisement of a Toyota vehicle towing a Chinese military truck. The intent was to highlight the superior quality of Toyota vehicles. Instead, Chinese consumers took offence because the advertisement evoked memories of Japanese occupation during the 1930s.

Research has shown that animosity feelings may be activated by situational cues (Riefler and Diamantopoulos, 2007); a foreign sponsorship message may be one such cue. Once activated, animosity sentiments may lead consumers to denigrate products from the transgressing country. Norman (1976) predicts a correlation between source attractiveness and advertising effectiveness, such that unattractive sources may lessen advertising effectiveness. In a sponsorship context, consumers may perceive the presence of a foreign
brand in a sponsored event as unattractive, especially if they harbor animosity toward the brand’s origin country. Animosity may thus decrease sponsorship goodwill since consumers may not perceive the support of a sponsor from a disliked country as beneficial to the event. Thus:

**H₅:** Animosity decreases the rate of improvement in (a) brand affect and (b) brand trust brought about sponsorship-linked marketing.

Because previous research suggests that event involvement (Meenaghan, 2001) and attitudes toward sponsorship (Quester and Thompson, 2001) influence sponsorship’s impact on brand affect and brand trust positively, we include these predictors in our conceptual model as control variables. Figure 1 illustrates our conceptual model using the latent growth modelling (LGM) approach detailed in the following section.

(Figure 1 here)

3. **Method**

3.1 **Sample and procedures**

To enhance the external validity of our results, we relied on quota sampling and real sponsorship activities associated with the 2012 London Olympics, a well-known and highly visible event with a very positive image for heterogeneous audiences. Among its many major sponsors, we selected a new entrant, EDF, a global French energy multinational. EDF spent about $40 million to become an Olympic sponsor (The Guardian, 2012) and a further $24 million to leverage this association through the “Energy of the Nation” campaign, a multiplatform communication campaign that included web presence, multimedia and mass
media advertising, throughout the United Kingdom (e.g., http://www.campaignlive.co.uk/news/1181089/). The animosity between U.K. and France is well known and has been widely investigated (e.g., Kumar, 2006). Moreover, Balabanis and Diamantopoulos (2004) show that consumer ethnocentrism has substantial influence on U.K. consumers. Therefore, the sponsorship of the 2012 Olympic in London by a French company attempting to enhance its brand equity in U.K. fits our research objectives.

We used a web panel to recruit 903 U.K. participants and achieved sample representativeness through quota sampling in terms of age and gender. To avoid demand effects, the focal questions were mixed with others unrelated to the study. Questions were mostly related to branding variables (for three energy companies: EDF, E.On and Scottish Power), the Olympics, cross-national variables, individual characteristics and demographics. The questionnaire took most participants 20 minutes to complete. The first wave (T1) took place just before the 2012 London Olympics in week 29 of 2012, the second wave (T2) occurred during the Olympics in week 31, and T3 in the closing week of the games in week 33. The online questionnaires were identical for all three waves. Of the 903 respondents recruited at T1, 694 completed the questionnaire at T2 (76.8%) and 577 (63.9%) responded to the T3 survey. The final sample (T3) contained 65% female and 35% male respondents, with an average age of 42.16 years (SD = 13.17). To control for potential mere measurement effects, 302 additional respondents completed the questionnaire only at T3.

3.2 Measures

We measured all constructs using previously validated scales. Drawing on Chaudhuri and Holbrook (2001), we used a three-item brand trust factor to determine the willingness to rely on a brand to perform its stated functions. Brand affect, a brand’s potential to elicit positive emotional responses from consumers, was a three-item construct adapted from
Becker-Olsen et al. (2006). Six items operationalised consumer ethnocentrism as the extent of support for products from one’s country (Klein et al., 2006). Cosmopolitanism was a six-item construct taken from Cleveland et al. (2009), similar to the concept of cultural open-mindedness in Riefler et al. (2012). We adapted three items from Russell and Russell (2010) to operationalise animosity as acrimonious beliefs against a particular country (i.e., France, in our study context). Attitudes toward the sponsorship were measured using three items from Quester and Thompson (2001). Finally, three items from Strazzieri (1994) measured event involvement. All measures are seven-point Likert scales anchored on strongly disagree and strongly agree. Table 1 lists the items and their descriptive statistics.

(Table 1 here)

3.3 Data analyses

Prior to fitting the data using LGM, we analysed them using four methods: attrition analyses, various psychometric tests, mere measurement effects, and measurement invariance. All tests that involved structural equation modelling, including LGM, used LISREL (v8.8) software. To begin, following Ployhart and Vandenberg’s (2010) procedure, we determined whether attrition led to non-random sampling. Using dummy variables, we classified respondents into three groups: Group 1 were participants who only completed the questionnaires at T1 (n = 209); Group 2 completed the questionnaires at both T1 and T2 (n = 117); and Group 3 completed all three waves (n = 577). Across the three waves, we found no significant differences in age, gender, residence, event involvement, attitudes toward sponsorship, ethnocentrism, cosmopolitanism, or animosity (all $p > .05$). Next, we sought differences in brand trust for each survey wave. We conducted a multivariate analysis of variance (MANOVA) test to check for overall response biases across the T1 measures as a function of group membership; a second MANOVA test for the T2 responses to the brand
trust measures included only Groups 2 and 3. Neither MANOVA test was significant (F(6,1794) = 1.923 and F(3,690) = 2.385, respectively). We similarly tested for differences in brand affect across the three survey waves. The first MANOVA test included the T1 measures of brand affect for all three groups; the second used the T2 measures of brand affect in Groups 2 and 3. Again, both MANOVA tests yielded non-significant results (F(6,1794) = .700 and F(3,690) = 1.698, respectively). Therefore, respondent attrition did not create any notable bias in the focal variables.

Next, we conducted various psychometric tests. All the variables exhibited acceptable reliability, ranging from .89 to .97 (see Table 2). We also confirmed discriminant validity since the average variance extracted exceeded the square of the correlations between constructs (Fornell and Larcker, 1981). Similar to Klein et al.’s (1998) findings, these results confirmed that consumer ethnocentrism and animosity are distinct constructs. The results also supported the distinction between brand trust and brand affect (Chaudhuri and Holbrook, 2001).

(Table 2 here)

To examine for potential mere measurement effects, a control group (n = 302) completed the questionnaires only at T3. To verify the comparability between the experimental group and this control group, we conducted chi-square tests with the sociodemographic variables (gender, revenues, age) and analyses of variance (ANOVA) to compare their means in terms of involvement in the event, ethnocentrism, animosity, and cosmopolitanism. All tests reported non-significant differences between the two groups (all p > .05). Next, MANOVA tests indicated no significant differences in brand affect and brand trust between the two groups (affect F = 1.003, p = .39; trust F = 1.360, p = .25). Measuring
brand affect and brand trust towards EDF three times over a five-week period thus did not produce mere measurement biases in consumers’ perceptions of EDF. Furthermore, the two groups did not differ significantly ($\chi^2 = .277, p = .60$) in awareness of the EDF sponsorship (45.2% for the experimental group and 43.4% for the control group). To ensure that our questionnaire did not condition respondents, we only measured sponsorship recognition at T3. The non-significant results confirmed the external validity of our study.

Finally, we undertook measurement invariance tests, prior to subjecting the data to the LGM analyses (Chan, 1998). Invariance in a LGM context exists if the nature of the construct operationalised by the measured variables remains unchanged across measurement occasions (configural invariance), and the relations between measures and their corresponding constructs are invariant across measurements occasions (metric invariance). We performed nested model comparisons to test for measurement equivalence. The results in Table 3 indicated that the assumptions of configural invariance and metric invariance were met for brand affect and brand trust. Thus, we incorporated the invariance constraints into the subsequent LGM analyses.

(Table 3 here)

4. Results of Latent Growth Modelling

To assess individual-level longitudinal changes in brand affect and brand trust, we used a LGM approach. Increasingly accepted in many disciplines for its capacity to describe, measure, and analyse longitudinal change (Ployhart and Vandeberg, 2010), LGM overcomes many challenges that have stymied previous attempts to operationalise intrapersonal change, such as repeated measures, regression, or difference scores (Chan, 1998). A key advantage of LGM is its ability to model both mean-level change and individual change differences, while
controlling for measurement error (Duncan et al., 2006). That is, LGM can identify predictors of change and explain individual differences in this change. In implementing this approach, we relied heavily on Chan’s (1998) comprehensive description of a second-order factor (SOF) LGM procedure with two phases.

4.1 Changes in brand affect and brand trust

In the first phase, we performed univariate SOF LGM analyses to determine the basic shape of the growth curves for brand affect and brand trust. To establish a final model that most adequately depicted the change trajectory, we fitted a series of nested univariate SOF LGM models to the data for each variable. The model shown in Figure 2 represents the linear form of a univariate latent growth model in which the two parameters, intercept and slope, described a systematic pattern of individual differences in intra-individual change over time. The figure shows the model for the brand-affect variable, measured at three points in time (BA1, BA2, BA3) over equally spaced three-week intervals.

(Figure 2 here)

Following LISREL notations, the first growth factor, labelled intercept $\eta_I$, is a constant for any given respondent across time, leading to fixed values of 1.0 for factor loadings (i.e., $\beta_{1I}, \beta_{2I}, \beta_{3I}$) on the repeated measures. The intercept factor represents information about the mean $\mu_I$ and variance $\sigma^2_I$ of the collection of individual intercepts of each respondent’s growth curve. The second growth factor, labelled slope $\eta_S$, represents information about the mean $\mu_S$ and variance $\sigma^2_S$ of the collection of individual slopes of each respondent’s growth curve. Both factors, as estimated from the data, may co-vary (estimated
as $\Psi_{IS}$, as indicated by the double-headed curved arrow between the factors. Because we wanted the intercept factor to represent the initial status at T1, the intercept should be located at BA1, which was achieved by fixing the slope factor loadings of $\beta_{1S}$ and $\beta_{2S}$ to 0 and 1, respectively. The remaining slope factor loading $\beta_{3S}$ could be freely estimated or fixed to specific values. Freely estimating the remaining loading is equivalent to modelling unspecified trajectories, where the shape of the trajectory may be determined by the data; this model is an optimal model. In such a model, the slope factor is better interpreted as a general shape factor. In Figure 2, $\beta_{3S}$ is fixed to 2 in order to assess a linear change model.

Because we had previously established metric invariance, all the univariate models included equality constraints on the first-order factor loadings for like items across the three measurement waves. In addition, we allowed the same-item residuals to co-vary across measurement occasions (Chan, 1998). Finally, we compared alternative growth models for the two dependent variables with respect to the functional form and the residual structure of the growth curve (homoscedastic versus heteroscedastic structure). The results of the corresponding nested model comparisons appear in Table 4.

(Table 4 here)

First, nested model comparisons indicated that a linear change model offered significant improvement over a no-growth model for both brand affect and brand trust. Moreover, estimating the free (i.e., optimal) latent growth models did not result in a significantly higher fit than the linear growth model. Therefore, we concluded that brand affect and brand trust changes were reasonably represented by a linear growth trajectory. Second, we tested the assumption that error variability remained constant for the repeated measurements. Allowing time-specific residual variances to differ resulted in significantly
higher model fits than models with a single residual variance. Thus, the heteroscedastic residual structure represented the sample data appropriately. The resulting latent growth models for brand affect and brand trust produced good overall fit statistics (Table 4).

Table 5 shows the estimated values for all parameters of the univariate models. Inspecting the means of initial status and change, we found that the average initial level of EDF’s brand affect before the 2012 London Olympics was 3.79, and brand affect increased by .14 during the event. Similarly, the average initial level of EDF’s brand trust was 3.95, followed by a .09 increase during the event. In support of H1 and H2, the mean change factor was positive and significant for both brand affect (μCH = .14, p < .001) and brand trust (μCH = .09, p < .001), such that these variables increased linearly with time. Moreover, the covariances between the initial level and the slopes for brand affect and brand trust were not statistically significant. Therefore, the rate of increase in both brand affect and brand trust over the study period appeared independent of the respondents’ initial level of brand affect or brand trust.

(Table 5 here)

4.2 Influence of consumer ethnocentrism, animosity, and cosmopolitanism

Second phase of the SOF LGM procedure estimated the multivariate SOF LGM model in Figure 1 to test the hypotheses related to consumer ethnocentrism, cosmopolitanism, and animosity. This multivariate model combined the two univariate latent growth models previously identified with the three predictors: ethnocentrism, animosity and cosmopolitanism. The model also estimated the covariances among initial status and change factors freely. Because previous research confirms the covariance between brand affect and brand trust
(Chaudhuri and Holbrook, 2001) and between ethnocentrism and cosmopolitanism (Cleveland et al., 2009), we allowed for the residual covariance between brand affect and brand trust, and for the covariance between ethnocentrism and cosmopolitanism in the structural model. The model exhibited a good fit with the data ($\chi^2_{(675)} = 2245.44$, $p < .001$; CFI = .93; NNFI = .92; SRMR = .013; RMSEA = .064). Figure 3 summarises the latent explanatory covariates that influence the growth variables. Within-domain covariances (not shown in Figure 3 for parsimony) were virtually identical to their corresponding values in the univariate models. Therefore, no abnormality affected the results when we combined the univariate models. The R-square values for latent change factors were .26 for brand affect and .11 for brand trust. The results supported H3, which predicted a negative relation of consumer ethnocentrism to the rate of improvement for brand affect ($\gamma = -.32$, $p < .001$) and brand trust ($\gamma = -.20$, $p < .001$).

(Figure 3 here)

In H4a, we predicted a positive relationship between cosmopolitanism and the improvement of brand affect, and we found conclusive support for this claim ($\gamma = .15$, $p < .01$). However, cosmopolitanism did not influence the change in brand trust ($p > .05$), thus rejecting H4b. Finally, animosity related negatively to the change in brand affect ($\gamma = -.25$, $p < .001$) and in brand trust ($\gamma = -.17$, $p < .001$), in full support of H5.

To sum up, these results confirmed the substantial role of consumer ethnocentrism and animosity in sponsorship effects, although the effects of consumer ethnocentrism were stronger than those of animosity. However, cosmopolitanism influenced sponsorship effects through only brand affect and not brand trust. To facilitate further interpretations of our findings, we formed six groups from our initial sample:
1. Respondents reporting high level of ethnocentrism (more than the mean).
2. Respondents reporting low level of ethnocentrism (less than the mean).
3. Respondents reporting high level of animosity.
4. Respondents reporting low level of animosity.
5. Respondents reporting high level of cosmopolitanism.
6. Respondents reporting low level of cosmopolitanism.

Univariate SOF modelling then examined the change trajectory for the two longitudinal dependent variables (i.e., brand affect and brand trust) in each group. For Groups 1, 3, and 6, brand affect and brand trust did not change significantly over time, whereas both brand affect and brand trust increased significantly in Groups 2, 4, and 5. In Figures 4 to 6, we illustrate these findings for brand trust (for parsimony, we omitted the graphs for brand affect, which were similar to those for brand trust). Thus, sponsorship-linked marketing enhanced brand affect and brand trust, but only for consumers who possessed low ethnocentric, low animosity, or high cosmopolitan outlook.

(Figure 4-6 here)

5. **Discussion**

In view of the dynamism of globalisation, sponsorship is a key component of brand managers’ marketing communication arsenal. In this longitudinal study, we investigate the changes in the sponsorship effects of brand trust and brand affect over time. We further investigate how changes in these focal variables are predicted by consumer nationalism. In doing so and as a key academic contribution to marketing research, we demonstrate the use of
LGM by disentangling the static and dynamic components of the focal variables (Chan, 1998). These elements support greater external validity of the results, compared with other methods.

5.1 **Sponsorship effects of brand affect and brand trust**

The results suggest that sponsorship leads to positive and linear increases in brand affect and brand trust over the Olympics sponsorship period. Conceivably, these effects arise from repeated exposures to the brand logo, as well as marketing communications (e.g., “Energy of the Nation” campaign), executed by EDF during the sponsorship period. From a managerial standpoint, these are key empirical findings, considering the high proportion of marketing budgets devoted to sponsorship and the ongoing managerial challenge to justify the spending (Morgan, 2012). However, we notice that the rate of improvement in brand affect is greater than in brand trust. These results may arise from the sensitivity of brand affect to changes in consumers’ brand attitudes over time. They also may imply that sponsorship is more effective for brand affect than for brand trust. Further research is needed to shed more light on this finding.

Further, a key consideration is how the improvements in brand affect and brand trust may decay after a sponsored event is finished. For example, Mazodier and Merunka (2012) found that sponsorship effects might be short-lived. If sponsorship effects are contingent on the period of the sponsored entity, brands looking for continual payback should sponsor either events that occur regularly or at fixed locations such as stadiums (Clark et al., 2002). Additional research should investigate the longitudinal decay of sponsorship effects explicitly.

5.2 **Consumer ethnocentrism, animosity, and cosmopolitanism**

The effects of cross-national variables highlight several academic and applied implications for sponsorship effects. As market globalisation exposes foreign firms to
potential backlash from consumer nationalistic tendencies, foreign firms need to harmonise product attributes with these customer attitudes across different cultures. Indeed, Reed et al. (2012) suggest that globalisation may even further entrench preference for local products. Yet sponsorship research seemingly has overlooked the influence of consumer nationalism on sponsorship effectiveness. Our study shows that foreign sponsors should not undermine the potential effects of consumer nationalism, and operate under the assumption that markets are homogenous across cultures. Instead, managers should track consumer nationalism as part of their international market research. Armed with this knowledge, they can then adapt their strategies in countries where consumer nationalism presents an informal but significant barrier to effective communication and trade.

Since our findings suggest that consumer ethnocentrism and animosity may dampen the effectiveness of sponsorship, managers must be cognizant of the potential negative consequences that can result from nationalistic fervour when selecting sponsorship event properties. The problems with consumer nationalism may be particularly poignant with sporting events with intense sports rivalry, where the majority of sponsorship activities occur.

Sponsorship may also not be appropriate for a foreign brand wanting to create brand equity in a local market, whose consumers are highly ethnocentric or possess strong animosity toward the brand’s origin country. However, as Steenkamp and de Jong (2010) suggest, an international company can craft a brand portfolio that includes both global brands and “local champions.” Then limited sponsorship activities within a local environment can concentrate on these subsidiary local brands. This strategy, however, will not apply where sponsorships involve globally recognisable brands in events with global audience, such as the Olympics.

Similar to how positive sponsorship effects may decay over time, what we do not know is whether the negative effects of ethnocentrism and animosity may dissipate as time
passes. This important question has far-ranging implications; the presence of foreign brands in national events can accustom local consumers to foreign sponsors, even those who harbor strong nationalistic feelings. It would be of interest to global brand managers to determine whether the negative effects of ethnocentrism and animosity on sponsorship effects are short-lived.

Unlike with consumer ethnocentrism and animosity, cosmopolitanism increases the rate of improvement although only for brand affect. The improvement in brand trust is not statistically significant, but it is nonetheless positive. The non-significant result for brand trust may arise because cosmopolitan consumers tend to judge a product objectively (Cannon and Yaprak, 2002). Particularly with a global conglomerate like EDF, consumers’ perceptions of the company's trustworthiness may be unrelated to their openness to foreign brands. Overall though, this study’s findings highlight that international brands can attract cosmopolitan consumers by promoting their own foreignness. Therefore, international marketing managers should target such global events for sponsorships in order to reach populations with high cosmopolitanism characteristics, such as consumers in Asia (Zhou and Belk, 2004).

Overall, the findings suggest that consumers may be segmented by their levels of ethnocentrism, animosity, or cosmopolitanism. Our results suggest to managers that to improve the efficacy of their sponsorship campaigns, they should target these segments using different marketing strategies. This research thus contributes to answering the crucial question: “what are the most effective and efficient ways of building a strong brand?” (Keller, 2003, p. 595).

5.3 Other noteworthy findings

Several other noteworthy findings emerged from this study. First, the initial status of brand affect and brand trust are positively related ($\psi = .13, p < .01$). There was a positive
association between the rate of increase in brand affect and the rate of increase in brand trust 
($\psi = .21, p < .001$). Collectively, these results supported previous findings of a relation 
between brand trust and brand affect (Chaudhuri and Holbrook, 2001).

Second, the significant intercept and slope variances indicate important inter-
individual differences in both the initial level of and the change in brand affect and brand trust. 
Such evidence provides strong justification for the incorporation of predictor variables to 
explain the changes in brand affect and brand trust caused by sponsorship.

Third, regarding potential changes in consumer ethnocentrism, cosmopolitanism, and 
animosity over the study period, we found that neither the linear nor optimal growth model 
resulted in a significantly higher fit than the no-growth model for any of the variables. These 
results are consistent with prior literature that suggests that cross-national dispositions may be 
deep-rooted and ingrained in a person’s self-identity, such that they remain stable over time 
(Kinder and Kam, 2010; Shimp and Sharma, 1987).

Fourth, it is conceivable that U.K. consumers with above average levels of 
ethnocentrism or animosity may exhibit reduced levels of brand affect or brand trust over time 
in response to EDF’s sponsorship. However, our findings showed no significant temporal 
changes in brand affect and brand trust for these consumers. This finding may be due to how 
EDF’s execution of the sponsorship program had assuaged the U.K. audience. For example, 
as the 2012 Olympics progressed, EDF monitored social media’s comments by the U.K. 
public and reported the general mood (i.e., how positive or negative) via an illuminated pie-
chart on the London Eye (e.g., http://www.wired.co.uk/news/archive/2012-07/20/london-eye-
twitter-sentiment). Sponsored by EDF and called the Energy of the Nation project, the 
initiative captured the U.K. public’s excitement as the pie-chart display celebrated the highs 
and lamented the lows of the U.K. Olympic athletes’ performances. By directly aligning itself 
with the fortunes of the U.K. Olympic team, EDF’s sponsorship might have mitigated
potential negative effects of sponsorship by a rival foreign country, France. Similarly, EDF not only sponsored U.K.’s Daily Mail newspapers’ coverage of the 2012 Olympics, but it also ran a competition offering readers monetary prize for locating the EDF logo hidden in the Olympics pull-out section (e.g., see http://mailconnected.co.uk/stats/news?item=4526). Given that the Daily Mail’s recurrent coverage of immigration issues within the U.K. (e.g., http://www.dailymail.co.uk/debate/article-2084923/Immigration-reducing-jobs-British-workers-David-Cameron-act-now.html) is likely to appeal to readers with higher than average levels of ethnocentrism and animosity, EDF’s sponsorship in the newspapers might have also placated readers’ perceptions of the foreign sponsor.

Finally, consistent with prior literature, event involvement related positively to the changes in brand affect ($\gamma = .15, p < .001$) and brand trust ($\gamma = .17, p < .01$). Attitudes toward the sponsorship also related positively to the change in brand affect ($\gamma = .14, p < .01$), but surprisingly did not influence the rate of improved brand trust ($p > .05$). Figure 3, shown earlier, summarised all our results.

5.4 Future research

The use of EDF, an industrial energy company, as the sponsoring brand makes measuring actual purchase behaviour impractical. Further research could replicate our study using consumer goods that facilitate the measurement of actual purchase behaviour. Similarly, studies should compare whether our findings hold across product types (e.g., industrial versus consumer goods) from the same foreign country, as well as across different product categories, brands, and countries.

The Olympic Games include competitions between two countries (e.g., soccer) and among multiple countries (e.g., swimming), with a major sponsor typically appearing across all games. As ethnocentrism concerns a general disdain for foreign countries whereas
animosity is directed at a particular country, future research should determine whether this study’s findings differ between the two event-types (e.g., FIFA World Cup versus an international swimming meet). It would also be of interest to longitudinally track changes in consumer nationalistic dispositions due to marketing communication activities, such as a long-term foreign sponsorship (e.g., naming rights to a sports stadium). Future research can also decompose consumer animosity into its sub-dimensions (e.g., Klein et al., 1998) before replicating this study.

Despite its obvious benefits, LGM is not without limitations. The nature of the data it demands restricted our study to a single event, country, and brand. This restriction intrinsically limits the external validity of our findings. Finally, we collected data at just three consecutive times, precluding the use of more sophisticated logistic or quadratic models to describe and explain intra-individual changes over time. Memory decay following a change in sponsor might be elucidated more comprehensively with additional data collections after an event.

In conclusion, this study extends sponsorship research by considering an area with key academic and managerial contributions, namely, the role of cross-national variables in sponsorship effects. In view of the dynamism of globalisation, a notable characteristic in international marketing is the prevalence of cross-border or global sponsorship deals involving foreign brands. This study highlights that the strategic use and outcomes of international sponsorship must be considered in conjunction with consumers’ perceptions of foreign sponsors from a nationalistic perspective.
References


Yue, M.-L., Thwaites, D. and Pillai, K. G. (2014), "Effectiveness of Olympic sponsorship by foreign and domestic companies: the influential role of consumer ethnocentrism", 


Figure 1
Conceptual Model

Brand Affect Initial level

Brand affect Change

Consumer ethnocentrism

H3 (-)

Consumer cosmopolitanism

H4 (+)

Animosity toward the country-of-origin

H5 (-)

Brand trust Initial level

Brand trust Change

H2 (+)

H1 (+)

Control variable
- Event involvement
- Attitudes toward sponsorship
Figure 2
Univariate SOF LGM model
Figure 3
Effects of Consumer Ethnocentrism, Cosmopolitanism, and Animosity on Brand Affect and Brand Trust Changes

* $p < .05$. ** $p < .01$. *** $p < .001$.

Notes: All values are standardised coefficients.
Figure 4
Ethnocentrism in Brand Trust Change Caused by Sponsorship-Linked Marketing Activities
Figure 5
Cosmopolitanism in Brand Trust Change Caused by Sponsorship-Linked Marketing Activities
Figure 6
Animosity in Brand Trust Change Caused by Sponsorship-Linked Marketing Activities
Table 1
Measures and Descriptive Statistics

<table>
<thead>
<tr>
<th>Consumer ethnocentrism</th>
<th>Factor Loading</th>
<th>Mean (Std Dev)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Only those products that are unavailable in England should be imported.</td>
<td>.77</td>
<td>4.31 (1.73)</td>
</tr>
<tr>
<td>English products, first, last, and foremost.</td>
<td>.87</td>
<td>4.32 (1.68)</td>
</tr>
<tr>
<td>English people should always buy English-made products.</td>
<td>.83</td>
<td>3.85 (1.76)</td>
</tr>
<tr>
<td>Don't buy foreign products, protect English business and reduce unemployment.</td>
<td>.86</td>
<td>4.08 (1.70)</td>
</tr>
<tr>
<td>It may cost me in the long run, but I prefer to support English products.</td>
<td>.83</td>
<td>4.36 (1.57)</td>
</tr>
<tr>
<td>English consumers who purchase products made in other countries are responsible for putting their fellow Englishmen out of work.</td>
<td>.74</td>
<td>3.44 (1.79)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cosmopolitanism</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I enjoy being with people from other countries to learn about their views and approaches.</td>
<td>.92</td>
<td>5.25 (1.45)</td>
</tr>
<tr>
<td>I like to observe people of other countries, to see what I can learn from them.</td>
<td>.92</td>
<td>5.14 (1.47)</td>
</tr>
<tr>
<td>I enjoy exchanging ideas with people from other cultures or countries.</td>
<td>.94</td>
<td>5.18 (1.48)</td>
</tr>
<tr>
<td>I am interested in learning more about people who live in other countries.</td>
<td>.93</td>
<td>5.28 (1.50)</td>
</tr>
<tr>
<td>I like to learn about other ways of life.</td>
<td>.91</td>
<td>5.41 (1.42)</td>
</tr>
<tr>
<td>I find people from other cultures stimulating.</td>
<td>.92</td>
<td>5.11 (1.48)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Animosity</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>France constantly ignores England’s positions in international affairs.</td>
<td>.89</td>
<td>3.58 (1.66)</td>
</tr>
<tr>
<td>I like French culture. (Reversed)</td>
<td>.88</td>
<td>3.48 (1.71)</td>
</tr>
<tr>
<td>France has too much economic influence in England.</td>
<td>.79</td>
<td>3.86 (1.68)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Brand affect</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel favourable about the energy company EDF.</td>
<td>.92</td>
<td>3.73 (1.35)</td>
</tr>
<tr>
<td>I feel positive about the energy company EDF.</td>
<td>.85</td>
<td>3.77 (1.35)</td>
</tr>
<tr>
<td>I have good feeling about the energy company EDF.</td>
<td>.89</td>
<td>3.87 (1.33)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Brand trust</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I trust EDF.</td>
<td>.97</td>
<td>3.95 (1.43)</td>
</tr>
<tr>
<td>EDF is an honest brand.</td>
<td>.97</td>
<td>3.91 (1.41)</td>
</tr>
<tr>
<td>EDF is a safe brand.</td>
<td>.97</td>
<td>3.83 (1.45)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attitudes toward sponsorship</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The Olympics are better because of sponsors</td>
<td>.81</td>
<td>3.57 (1.46)</td>
</tr>
<tr>
<td>The Olympics would not be possible without sponsorship</td>
<td>.92</td>
<td>3.85 (1.49)</td>
</tr>
<tr>
<td>I would be inclined to give my business to firms that sponsor the Olympics</td>
<td>.81</td>
<td>4.29 (1.49)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Event involvement</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The 2012 Olympics is a domain that interests me.</td>
<td>.94</td>
<td>4.17 (1.77)</td>
</tr>
<tr>
<td>I give a particular importance to the 2012 Olympics.</td>
<td>.96</td>
<td>4.10 (1.82)</td>
</tr>
<tr>
<td>I’m very interested in the 2012 Olympics.</td>
<td>.93</td>
<td>4.11 (1.95)</td>
</tr>
<tr>
<td>Variable</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>1. Brand trust/T1</td>
<td>11.71</td>
<td>4.20</td>
</tr>
<tr>
<td>2. Brand affect/T1</td>
<td>11.42</td>
<td>3.71</td>
</tr>
<tr>
<td>3. Event involvement /T1</td>
<td>12.18</td>
<td>5.60</td>
</tr>
<tr>
<td>4. Attitudes toward sponsorship/T1</td>
<td>11.71</td>
<td>4.00</td>
</tr>
<tr>
<td>5. Animosity/T1</td>
<td>10.92</td>
<td>4.53</td>
</tr>
<tr>
<td>6. Ethnocentrism/T1</td>
<td>24.36</td>
<td>8.70</td>
</tr>
<tr>
<td>7. Cosmopolitanism/T1</td>
<td>31.09</td>
<td>8.71</td>
</tr>
<tr>
<td>8. Brand trust/T2</td>
<td>11.95</td>
<td>4.55</td>
</tr>
<tr>
<td>9. Brand affect/T2</td>
<td>11.86</td>
<td>3.86</td>
</tr>
<tr>
<td>10. Brand trust/T3</td>
<td>12.25</td>
<td>4.65</td>
</tr>
<tr>
<td>11. Brand affect/T3</td>
<td>12.12</td>
<td>4.32</td>
</tr>
</tbody>
</table>

**p < .01, *p < .05.
Table 3
Results of Measurement Invariance Tests

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>CFI</th>
<th>NNFI</th>
<th>SRMR</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand affect</td>
<td>Configural invariance</td>
<td>56.05***</td>
<td>15</td>
<td>.99</td>
<td>.98</td>
<td>.029</td>
<td>.069</td>
</tr>
<tr>
<td></td>
<td>Metric Invariance</td>
<td>57.33***</td>
<td>19</td>
<td>.99</td>
<td>.99</td>
<td>.029</td>
<td>.059</td>
</tr>
<tr>
<td>Brand trust</td>
<td>Configural invariance</td>
<td>32.06**</td>
<td>15</td>
<td>1.00</td>
<td>1.00</td>
<td>.001</td>
<td>.044</td>
</tr>
<tr>
<td></td>
<td>Metric Invariance</td>
<td>40.86**</td>
<td>19</td>
<td>1.00</td>
<td>1.00</td>
<td>.015</td>
<td>.045</td>
</tr>
</tbody>
</table>

*** $p < .001$. ** $p < .01$. * $p < .05$.
Notes: CFI = confirmatory fit index; NNFI = non-normed fit index; SRMR = square root mean residual; RMSEA = root mean square error.
Table 4
Univariate SOF Latent Growth Models: Test of Alternative Specifications

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model</th>
<th>Change Function</th>
<th>First-Order Function</th>
<th>Residual Structure</th>
<th>(\chi^2)</th>
<th>df</th>
<th>CFI</th>
<th>NNFI</th>
<th>SRMR</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand affect</td>
<td>Model 0</td>
<td>No change</td>
<td>Heteroscedastic</td>
<td>139.55***</td>
<td>29</td>
<td>.98</td>
<td>.97</td>
<td>.066</td>
<td>.081</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Model 1a</td>
<td>Linear</td>
<td>Heteroscedastic</td>
<td>91.57***</td>
<td>26</td>
<td>.99</td>
<td>.98</td>
<td>.033</td>
<td>.066</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Model 2</td>
<td>Linear</td>
<td>Homoscedastic</td>
<td>106.83***</td>
<td>28</td>
<td>.98</td>
<td>.98</td>
<td>.037</td>
<td>.070</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Model 3</td>
<td>Optimal</td>
<td>Heteroscedastic</td>
<td>90.71***</td>
<td>25</td>
<td>.99</td>
<td>.98</td>
<td>.033</td>
<td>.068</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Model 4</td>
<td>Optimal</td>
<td>Homoscedastic</td>
<td>97.53***</td>
<td>27</td>
<td>.99</td>
<td>.98</td>
<td>.036</td>
<td>.067</td>
<td></td>
</tr>
<tr>
<td>Brand trust</td>
<td>Model 0</td>
<td>No change</td>
<td>Heteroscedastic</td>
<td>137.42***</td>
<td>29</td>
<td>.99</td>
<td>.99</td>
<td>.087</td>
<td>.081</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Model 1a</td>
<td>Linear</td>
<td>Heteroscedastic</td>
<td>73.53***</td>
<td>26</td>
<td>1.00</td>
<td>.99</td>
<td>.022</td>
<td>.056</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Model 2</td>
<td>Linear</td>
<td>Homoscedastic</td>
<td>81.36***</td>
<td>28</td>
<td>.99</td>
<td>.99</td>
<td>.038</td>
<td>.058</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Model 3</td>
<td>Optimal</td>
<td>Heteroscedastic</td>
<td>77.37***</td>
<td>25</td>
<td>.99</td>
<td>.99</td>
<td>.022</td>
<td>.060</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Model 4</td>
<td>Optimal</td>
<td>Homoscedastic</td>
<td>79.21***</td>
<td>27</td>
<td>.99</td>
<td>.99</td>
<td>.030</td>
<td>.058</td>
<td></td>
</tr>
</tbody>
</table>

*a Retained (most parsimonious model).

*** \(p < .001\). ** \(p < .01\). * \(p < .05\).
Table 5
Univariate SOF Latent Growth Models: Growth Parameter Estimates

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Initial Status (IS)</th>
<th>Change (CH)</th>
<th>Covariance IS – CH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean ( \mu_{IS} )</td>
<td>Mean ( \mu_{CH} )</td>
<td>Variance ( \sigma^2_{IS} )</td>
</tr>
<tr>
<td>Brand affect (linear &amp; hetero)</td>
<td>3.79***</td>
<td>.14***</td>
<td>1.25***</td>
</tr>
<tr>
<td>Brand trust (linear &amp; hetero)</td>
<td>3.95***</td>
<td>.09***</td>
<td>1.85***</td>
</tr>
</tbody>
</table>

* * p < .05. ** p < .01. *** p < .001.