Team-Sponsorship in the Formula One – Does It Affect Brand Perception? an Empirical Assessment in the German Car Market

David M. Woisetschlager, University of Muenster, Germany

Sponsorship of worldwide sports events as a marketing tool has grown remarkably during the last two decades. Besides the FIFA World Cup™ or the Olympic Games, the Formula One is the only event with a comparable global character. Many companies use Formula One as a platform for building, strengthening and holding up their brands. In the present paper, we take a look at the drivers that influence sponsorship recall and measure the influence of Formula One team-sponsorship on brand awareness and brand image dimensions over time. Results indicate (1) brand equity, event- and product-involvement as antecedents of sponsorship recall, (2) a significant influence of sponsorship recall on brand awareness and brand image, and (3) an improvement of brand awareness and brand image over time for those consumers that evaluated the sponsored event relatively better than the brand in the first place.

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INTRODUCTION
Sponsorship as a marketing tool has grown remarkably during the last two decades, especially with respect to the endorsement of worldwide sports events. Besides the FIFA World Cup™ or the Olympic Games, the Formula One is the only event with a comparable global character taking place in 17 countries all over the world, ranging from Brazil to Japan, from Australia to Italy and, for a short time, the US. It consequently stands to reason, that especially many big international companies use Formula One as a platform for building, strengthening and holding up their brand equity. With its extension to Shanghai in 2005, the Formula One has become fully globalized.

The Formula One Circuit is financed predominantly out of sponsorship money, while TV broadcast and entrance fees are of only minor importance. In the past, the Tobacco Industry has been one of the biggest contributors to the Formula One. Since the European Union ordered the tobacco companies to back out of the sponsorship deals by 2006, the teams now have to find new business partners. Consequently many global players like Emirates, Red Bull and Intel are entering the Formula One. However, companies that engage in Formula One sponsorship have to be sure about the effectiveness and efficiency of their engagement. Companies expect an effect of sponsorship on the brand, more specifically on brand awareness and on brand image dimensions. Brand awareness relates to the strength of a brand in memory, and the likelihood and ease with which the brand will be recognized or recalled under various conditions (Silverman et al. 1999). Brand image is defined as “perceptions about a brand as reflected by the brand associations held in consumer memory” (Keller 1993). The favorability, strength and uniqueness of brand image permit the brand to be strategically differentiated and positioned in the consumer’s mind.

In the present paper, I take a closer look at the Formula One activities of Toyota and its impact on the brand awareness and brand image dimensions in the German consumer market. In the last decades, the Toyota Motor Corporation (TMC) has been subject to several studies and been a main attraction to both competitors and the scientific communities (e.g. Womack et al. 1990). While the specific capabilities of TMC in technology, total quality management (Kaizen) and efficiency (Kanban) contributed to its current dominant position in most world markets (above 10 percent market share world wide), its market position in Germany remains weak (about 4 percent market share in 2004; Frank 2004). Especially in Germany, Japanese brands are valued for their functional attributes but are evaluated poorly concerning the non-attribute based image such as personality and character, attractiveness and likeability (Vogel et al. 2006). One of Toyota’s most important aims in the Formula One is to improve its non-attribute based image (Toyota 2005).

I contribute to the literature by analyzing (1) antecedents of sponsorship recall that can be explained through prominence heuristics and involvement, (2) consequences of sponsorship recall on the evaluation of brand awareness and brand image dimensions that are explained with mere exposure effects. (3) Both antecedents and consequences are analyzed for two measuring points using a panel of 2,116 (1,131) consumers. (4) Finally, I take a look at the change of brand awareness and brand image between the two measurement points and assess, whether the “fit” between the image of formula one and the sponsoring brand plays a critical role in the process of image transfer.

THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT
As sponsorship became more and more important in terms of growing budgets since the late 1980s, research on sponsorship had been intensified accordingly to this development. Five research streams (nature of sponsorship, managerial issues, measurement of sponsorship effects, strategic aspects, and legal and ethical issues) have been identified by Cornwell and Maigman (1998) and updated by Walliser in 2003 including later–primarily European–research. In this study, the issue of measurement of sponsorship effects is addressed.

Measurement of sponsorship effects is still a topic that is of growing interest to both the scientific community and practitioners. Sponsorship has been found to affect (1) brand awareness (e.g. Quester and Thompson 2001), (2) brand image/associations (e.g. Javalgi et al. 1994; Pope and Voges 1999, ), (3) employees (e.g. Grimes and Meenagh 1998), (4) purchasing intention (e.g. Bennett et al. 2002; Pope and Voges 1999, 2000; Speed and Thompson 2000), (5) and even investor relations and stock market prices (e.g. Cornwell, Clark and Pruitt 2004; Cornwell and Pruitt 2001). Especially the potential influence of sponsorship on brands has been subject of several studies (e.g. Grohs et al. 2004; Gwinner and Eaton 1999; Javalgi et al. 1994; Speed and Thompson 2000).

However, the analysis of the effect of sponsorship on brand image over time has been only subject of very few research works (e.g. Quester and Farrelly 1998; Becker-Olsen and Simmons 2002; Grohs et al. 2004; Pitts and Slattery 2004). A reason for that could be the lack of sound theoretical underpinning of the effects of sponsorship.

For instance, Cornwell, Weeks and Roy (2005, p. 21) claim, that research on sponsorship effects “is lacking theoretical frameworks of how sponsorship works in the minds of consumers” and provide a number of theoretical explanations of sponsorship effects. More precisely, they identify a number of processing mechanisms that provide a theoretical explanation of sponsorship on a cognitive, affective and behavioral level (Cornwell, Weeks and Roy 2005, p. 22).

For my investigation of effects in the context of Formula One Sponsorships, I draw back on (1) prominence heuristics, (2) the mere exposure effect and (3) balance theory.

(1) Prominence heuristic, as analyzed by Pham and Johar (2001), proposes that well-known brands are recalled more frequently in comparison to less known brands. They claim, that sponsorships for brands that are less known should be avoided, when other–well-known–brands are engaged in a sponsorship in the same field.

More specifically, sponsorship recall is influenced by existing knowledge about the brand, and the involvement of a particular person with the product category of the brand and the sponsored event. Following the heuristic of brand prominence, one can argue that high brand equity—which is defined as difference in consumer choice between the focal branded product and an unbranded product given the same level of product features (Yoo et al. 2000) will make it more likely that a specific sponsor is recalled. This rationale
is confirmed by the findings of Pham and Johar (2001). Therefore, one can hypothesize that

\[ H_{1A} \]: The higher the brand equity of a specific sponsor, the more likely it will be recalled.

Furthermore, it could be expected that product-related involvement and involvement with the specific event will lead to a higher probability, that a person will recall the sponsorship stimulus. In a low-involvement condition, consumers will process the stimulus less intensively (Krugman 1965, 1966). This rationale is confirmed by the findings of Grohs et al. (2004). Hence, it is proposed that

\[ H_{1B} \]: The higher the product-related involvement, the more likely the sponsorship will be recalled.

\[ H_{1C} \]: The higher the event-related involvement, the more likely the sponsorship will be recalled.

(2) The mere exposure effect suggests that in absence of other stimuli (Baker 1999), repeated exposure to a stimulus will lead to an affective reaction (Zajonc 1968). Sponsorship is similar to advertising—often directed to respondents in a situation where they pay low attention to the stimulus (e.g. because of concentrating to the event). Therefore, it has to be repeated several times in order to attract the attention of a respondent’s mind (Baker 1999). Existence of the mere exposure effect is confirmed by several studies (e.g. Bennett 1999; Olson/Thjømstø 2003).

On the basis of the existence of mere exposure effects, it is proposed that if a person is able to recall Toyota as a Formula One sponsor or advertiser, the awareness and image of the brand (as defined in the introduction of this article) will be significantly more favorable than for persons that do not recall the any of those two stimuli. This is in accordance with findings in existing literature (e.g. Bennett 1999). Hence, I hypothesize that

\[ H_{2A} \]: If a sponsor is recalled, its brand awareness will be significantly more favorable.

\[ H_{2B} \]: If a sponsor is recalled, its brand image will be significantly more favorable.

(3) The attitude toward the event (i.e., event image) is supposed to influence the processing of the sponsoring stimulus. Many authors claim, that a “fit” between the sponsored event and the sponsoring brand is essential to realize an image transfer (e.g., Cornwell et al. 2005; Dean 2002; Hastie 1980). However, learning is less likely to take place if sponsor and sponsored event are already perceived as “congruent”. Following balance theory (Heider 1946, 1958), I propose that a positive distance in evaluation of the event relative to the brand in t=1 will lead to an increase in awareness and image transfer (increase in favorability of brand dimensions) in t=2. According to balance theory, people that identify a sponsor to be associated with an event or team in the first place and have a relatively negative opinion about the sponsoring brand in comparison to the sponsored event will evaluate the brand more positively over time. Based on assimilation-contrast theory (Sherif and Hovland 1961), a decrease in favorability of the brand dimensions is expected, if the brand is evaluated better than the event in t=1 using the same explanation as above. Since the brand is evaluated more positively than the event in the first place, the knowledge of a relatively negative cue (i.e., that the brand is engaged in sponsoring an event with a negative image) will lead to a less favorable evaluation of the brand in t=2. No effect is expected for a “fit” i.e. a relatively similar evaluation. Therefore, it is hypothesized that

\[ H_{3A} \]: A positive difference in evaluation of the event image relative to brand awareness/brand image leads to an increase in brand awareness/brand image favorability.

\[ H_{3B} \]: A negative difference in evaluation of the event image relative to brand awareness/image leads to a decrease in awareness/brand image favorability.

METHODOLOGY

Questionnaire Development and Pretesting

To measure the respondents’ perceptions with regard to brand awareness and brand image a pool of sample measures was generated based on literature review (see appendix). The items were pretested using a sample of 20 German undergraduate marketing students. These subjects did not participate in the following field survey. Regarding question content, wording, format and layout there were no signs of any misunderstanding reported by the respondents.

Measurements

On that basis a questionnaire was developed consisting of three different parts. In the first part, the respondents were asked to name car brands they could remember from (1) advertising and (2) sponsoring a Formula One team. Following Baker et al. (1986) and Keller (1993), I decided against asking for ad/sponsorship recognition, since the unaided awareness of a brand is supposed to be a required condition for the purchase of more complex products e.g. cars. Moreover, the measurement of recognition would be subject to several biases, e.g. interest of a person in the brand (Bennett et al. 2002, p. 177) and, more importantly, to a bias in the second survey.

In the second part, the respondents were asked to evaluate several brand related constructs (brand awareness, brand equity and several image attributes) for Toyota and one of 13 other brands. These brands were only included in the questionnaire to avoid a possible identification of the questionnaires purpose in the second survey. Sponsor-related variables were measured using multi-item scales. All items are measured on 7-point Likert-type scales, with anchors of 1=strongly agree and 7=strongly disagree. Based on Yoo et al. (2000) 3 of their items were used to measure a sponsor’s brand awareness and 4 items to measure brand equity. Several items from Verhoef et al. (2004) and from the Allison-Fisher Barometer of Awareness and Imagery (as described in the article of Scott and English (1989), see appendix for the list of items) were used to measure brand image and the image of the sponsored event. Conceptualizing brand image, Park and Srinivasan (1994) postulate that brand image consists of an attribute related dimension and a non-attribute component. I follow Park and Srinivasan (1994) and postulate that brand image (in the case of automobile brands) consists of two dimensions: Functional trust, which consists of attributes that are closely linked to quality and hedonic image which is built by attributes that represent the personality and imagery of a consumer.

Finally the respondents were asked for their interest in cars in general, their involvement with the Formula One and socio-demographics.

Sample and Data Collection

To test the hypotheses, data was collected via internet. A questionnaire was mailed to 40,927 E-Mail addresses in Germany.

1These 14 brands were selected because they account for 86.06 % of the German car market in 2004. The remaining 13.94 % if the market contains several niche producers with little relevance to the market as a whole.
The population was chosen based on a selection of E-Mail addresses that is representative to Germany concerning age, gender and region with support of CIAO Online Surveys. A total of 4,173 respondents answered the first survey in January 2005, 2,116 of them also participated in the second survey in July 2005 (one week after F1 season height in Hockenheim, Germany), equaling a response rate of 10.2 % (50.5 %). 48.1 % (51.4 %) of the participants were male, average age of the participants was 38.9 (standard dev. 11.6) and 38.5 (11.9) in the second survey. The first dataset was split into two equal parts. An exploratory factor analysis was conducted and all constructs were identified as proposed above. One item was eliminated from the brand awareness construct due to low indicator reliability (BA2) and from the event image construct (IF1) for the same reason. The results of the confirmatory factor analysis with the second part of the dataset are depicted in table 1 below.

### RESULTS

To test the effect of brand equity and involvement on the recall of Toyota as a sponsor of a Formula One-team, a logistic regression was conducted with the dichotomous variable “recall” as dependent, and brand equity, product-related involvement and event-related involvement as independent variables for one measuring point. Studentized residuals, Cook’s Distance and multicollinearity were examined to determine if assumptions of logistic regression were violated.

As can be seen from table 2, all three constructs exhibit statistically significant positive influence on the likelihood a sponsor is to be recalled. The influence of event-related involvement is highest, followed by brand equity and product-related involvement. All three Hypotheses H1A, H1B and H1C are confirmed, also with the replication using the second dataset. The model fits well since only four iterations were needed until no further improvement of the likelihood was achieved (improvement<.001) and the likelihood-ratio test led to highly significant results. Nagelkerke’s $R^2$ (NR$^2=0.232/0.184$) is satisfying.

The effect of Ad and Sponsorship recall on the dependent constructs is tested by conducting a MANCOVA. The required assumptions were checked as discussed in existing literature (e.g.

### TABLE 1

CFA of Constructs

<table>
<thead>
<tr>
<th>Factor</th>
<th>Indicator</th>
<th>Indicator Reliability</th>
<th>Alpha</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product-related involvement</td>
<td>IP1</td>
<td>0.834</td>
<td>0.889</td>
<td>0.886</td>
<td>0.723</td>
</tr>
<tr>
<td></td>
<td>IP2</td>
<td>0.753</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IP3</td>
<td>0.581</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Event-related involvement</td>
<td>IE1</td>
<td>0.955</td>
<td>0.952</td>
<td>0.954</td>
<td>0.875</td>
</tr>
<tr>
<td></td>
<td>IE2</td>
<td>0.937</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IE3</td>
<td>0.733</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Event image</td>
<td>IF2</td>
<td>0.869</td>
<td>0.906</td>
<td>0.910</td>
<td>0.673</td>
</tr>
<tr>
<td></td>
<td>IF3</td>
<td>0.529</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IF4</td>
<td>0.874</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IF5</td>
<td>0.712</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand equity</td>
<td>BE1</td>
<td>0.692</td>
<td>0.936</td>
<td>0.951</td>
<td>0.829</td>
</tr>
<tr>
<td></td>
<td>BE2</td>
<td>0.865</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BE3</td>
<td>0.914</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BE4</td>
<td>0.845</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand awareness</td>
<td>BA1</td>
<td>0.581</td>
<td>0.768</td>
<td>0.663</td>
<td>0.498</td>
</tr>
<tr>
<td></td>
<td>BA3</td>
<td>0.415</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attribute-based image</td>
<td>F1</td>
<td>0.908</td>
<td>0.940</td>
<td>0.938</td>
<td>0.754</td>
</tr>
<tr>
<td>(functional)</td>
<td>F2</td>
<td>0.925</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F3</td>
<td>0.699</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F4</td>
<td>0.626</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F5</td>
<td>0.613</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-attribute-based image</td>
<td>H1</td>
<td>0.752</td>
<td>0.927</td>
<td>0.930</td>
<td>0.691</td>
</tr>
<tr>
<td>(hedonic)</td>
<td>H2</td>
<td>0.694</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>H3</td>
<td>0.623</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>H4</td>
<td>0.696</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>H5</td>
<td>0.803</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>H6</td>
<td>0.579</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Goodness-of-fit statistics: CFI (0.942); TLI (0.933); RMSEA (0.071); SRMR (0.035).
Tabachnik and Fidell (2001, pp. 282 and pp. 329). Since the assignment to different groups (dependent on recall of the independent stimuli) could not be randomized by default, group sizes vary strongly. Therefore, the dataset was reduced in order to achieve equal group sizes (random samples from the larger groups). The constructs are not normally distributed and homogeneity of variances of the dependent variables was slightly different. According to Olson (1974, pp. 894) and Bray and Maxwell (1985, pp. 33), these violations can be accepted if the dataset is large enough and the group sizes are equal. As described in table 3 below, cell size in the first dataset is 270 (2x2x270=1040 total) and 196 (2x2x196=784 total) in the second dataset.

Unweighted means of the item scores were used as values for the dependent constructs. The construct of event-related involvement interacts with the independent factors, therefore only product-related involvement is used as a Co-Variable. Results of the MANCOVAs of the two measurements indicate significant main effects and an insignificant interaction effect. The influence of product-related involvement is also significant in both surveys. Following Cohen (1988), the strength of the effects is rather small (only ad recall yields the 5.9 % level of a middle-sized effect).

Follow-Up-ANCOVAs were conducted to determine the effect of the stimuli and Co-Variable on each dependent construct. As can be seen from table 4, all main effects are significant for each construct. However, the strength of the effects differs largely. In the first round, the effect of ad recall on brand awareness and non-attribute-based image is much higher than in the second survey, on the contrary, the effect of sponsorship recall is much stronger in the second survey. Since Toyota was relatively successful in the Formula One Season 2005 up to the measuring point in late July (57 points compared to a total of 8 points in the 2004 Season), this offers a possible explanation of the increase in sponsorship effect. The weakening of the ad effect could be explained due to the fact that one of the most expensive advertising measures of Toyota—the role of media presenter of the German Soccer League “Bundesliga” – was absent for more than a month because of the season break.

Lastly, post-hoc-tests were conducted to check, whether the hypothesized effects show into the proposed direction. As described in tables 5A (first survey) and 5B (second survey), the knowledge of a stimulus leads to a significantly better evaluation of each brand construct. Therefore, our Hypotheses H2A and H2B can be confirmed.

Finally, I take a look at the change of brand awareness and brand image dimensions between the two measuring points. As proposed in Hypothesis H3, we a more positive evaluation of the brand Toyota in t=2 is expected if the image of Toyota is evaluated relatively worse comparing to the image of Formula One in t=1. Only consumers are included in this analysis that could at least once recall Toyota as a Formula One sponsor. Results in table 6 show that only the group that evaluated Toyota relatively worse comparing to Formula One (“positive distance”) in the first place has a significant awareness/image enhancement, giving support for Hypotheses H3A and H3B.

### TABLE 2
Logistic Regressions of drivers of Sponsorship Recall (measuring times 1/2)

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Coefficient b (Significance)</th>
<th>S.E.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product-related involvement</td>
<td>-0.139***/-0.099***</td>
<td>0.038/0.037</td>
</tr>
<tr>
<td>Event-related involvement</td>
<td>-0.383***/-0.335***</td>
<td>0.029/0.028</td>
</tr>
<tr>
<td>Brand equity</td>
<td>-0.112***/-0.134***</td>
<td>0.033/0.032</td>
</tr>
</tbody>
</table>

***p<0.01; **p<0.05; *p<0.1; Nagelkerkes R²=0.232/0.184; Model ended after four/four iterations.

### TABLE 3
Results of MANCOVA (first dataset/second dataset)

<table>
<thead>
<tr>
<th>Effect</th>
<th>Factor</th>
<th>Wilks-Lambda</th>
<th>F-Value</th>
<th>Eta-Square (η²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effect</td>
<td>Ad recall</td>
<td>0.923/0.952</td>
<td>27.326***/12.051***</td>
<td>7.7 %/4.8 %</td>
</tr>
<tr>
<td></td>
<td>Sponsorship recall</td>
<td>0.980/0.960</td>
<td>6.752***/9.947***</td>
<td>2.0 %/4.0 %</td>
</tr>
<tr>
<td>Interaction Effect</td>
<td>Ad recall x Sponsorship recall</td>
<td>0.997/0.990</td>
<td>0.946/2.366*</td>
<td>0.3 %/1.0 %</td>
</tr>
<tr>
<td>Co-Variable</td>
<td>Product-related involvement</td>
<td>0.938/0.978</td>
<td>21.450***/5.283***</td>
<td>6.2 %/2.2 %</td>
</tr>
</tbody>
</table>

***p<0.01; **p<0.05; *p<0.1; n₁=1040/n₂=784
### TABLE 4
Results of Follow-Up-ANCOVAs (first dataset/second dataset)

<table>
<thead>
<tr>
<th>Faktor</th>
<th>Brand awareness</th>
<th>Attribute-based Image (Functional)</th>
<th>Non-attribute-based Image (Hedonic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ad recall</td>
<td>53.058*** (5.1 %)/ 10.973*** (1.5 %)</td>
<td>46.453*** (4.5 %)/ 34.288*** (4.6 %)</td>
<td>63.261*** (6.1 %)/ 21.590*** (2.9 %)</td>
</tr>
<tr>
<td>Sponsorship recall</td>
<td>5.840** (0.6 %)/ 19.858*** (2.7 %)</td>
<td>18.368*** (1.8 %)/ 19.380*** (2.6 %)</td>
<td>3.071* (0.3 %)/ 4.609** (0.6 %)</td>
</tr>
<tr>
<td>Ad recall x Sponsorship recall</td>
<td>0.642 (0.1 %)/ 0.009 (0.0 %)</td>
<td>0.396 (0.0 %)/ 1.049 (0.1 %)</td>
<td>2.691 (0.3 %)/ 5.220** (0.7 %)</td>
</tr>
<tr>
<td>Product-related involvement</td>
<td>28.992*** (2.9 %)/ 0.464 (0.1 %)</td>
<td>26.952*** (2.7 %)/ 5.502*** (0.8 %)</td>
<td>0.036 (0.0 %)/ 1.173 (0.2 %)</td>
</tr>
</tbody>
</table>

F-Values ($\eta^2$ in Percent) of Follow-Up-ANCOVAs; ***p<0.01; **p<0.05; *p<0.1.

### TABLE 5A
Results of Post-hoc-Tests (first dataset)

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Ad recall</th>
<th>Sponsorship recall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Brown-Forsythe MV (SD)</td>
<td>No</td>
</tr>
<tr>
<td>Brand awareness</td>
<td>53.736*** 3.11 (1.48)</td>
<td>3.81 (1.56)</td>
</tr>
<tr>
<td>Attribute-based image (functional)</td>
<td>42.368*** 2.74 (1.32)</td>
<td>3.28 (1.32)</td>
</tr>
<tr>
<td>Non-attribute-based image (hedonic)</td>
<td>67.555*** 3.62 (1.41)</td>
<td>4.33 (1.32)</td>
</tr>
</tbody>
</table>

***p<0.01; **p<0.05; *p<0.1; MV=Mean Value; SD=Standard Deviation

### TABLE 5B
Results of Post-hoc-Tests (second dataset)

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Ad recall</th>
<th>Sponsorship recall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Brown-Forsythe MV (SD)</td>
<td>No</td>
</tr>
<tr>
<td>Brand awareness</td>
<td>12.739*** 3.12 (1.48)</td>
<td>3.49 (1.47)</td>
</tr>
<tr>
<td>Attribute-based image (functional)</td>
<td>31.731*** 2.75 (1.29)</td>
<td>3.28 (1.33)</td>
</tr>
<tr>
<td>Indir. effect</td>
<td>No Ad Recall</td>
<td>Ad Recall 3.166* 3.84 (1.34)</td>
</tr>
</tbody>
</table>

***p<0.01; **p<0.05; *p<0.1; MV=Mean Value; SD=Standard Deviation
fore, the sole measure of recall does not offer an unbiased conclusion of sponsorship effectiveness. Moreover, the impact of sponsorship on the brand has to be separated statistically by other possible influences. A first attempt was made in this paper by including advertising recall as a complementary promotion action of companies. The change of brand awareness and brand image dimensions over time was found to depend on the relative evaluation of event image vs. brand image in the first place. This result is in accordance with balance theory and attribution-contrast-theory but contradicts empirical results of other authors (e.g. Speed and Thompson 2000; Dean 2002).

Further research should focus on gaining insights about how the sponsorship message is processed by consumers. Possibly experiments are particularly suitable to deepening the understanding about processing of the sponsorship message in comparison to field studies. However, especially from a practitioner’s perspective, rigorously conducted field studies in a real context can lead to an improvement of current sponsorship evaluation practice which is often based on recall measures solely or evaluation of broadcast time. The use of panel data is adequate to analyze individual responses (e.g. change in attitudes or behavior) over time.

**REFERENCES**


**TABLE 6**

Regression of distance (Event-image-Brand) on change of brand evaluation

<table>
<thead>
<tr>
<th></th>
<th>Group with positive distance</th>
<th>Group with low distance (αFit)</th>
<th>Group with negative distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand awareness</td>
<td>-0.116*</td>
<td>-0.073n.s.</td>
<td>-0.004n.s.</td>
</tr>
<tr>
<td>Attribute-based image</td>
<td>-0.236***</td>
<td>-0.029n.s.</td>
<td>0.071n.s.</td>
</tr>
<tr>
<td>Non-attribute-based image</td>
<td>-0.167***</td>
<td>-0.051n.s.</td>
<td>0.038n.s.</td>
</tr>
</tbody>
</table>

Standardized Beta, ***p<0.01; **p<0.05; *p<0.1


APPENDIX
List of Items

**Product-related involvement**
- **IP1** I am very interested in cars in general
- **IP2** I know a lot about cars
- **IP3** I regularly catch up on news about new car models

**Event-related involvement**
- **IE1** I regularly watch Formula One
- **IE2** Formula One is important for me
- **IE3** Formula One means a lot to me

**Event-Image**
- **IF1** Formula One stands for sportiveness
- **IF2** Formula One is likeable
- **IF3** Formula One is unique
- **IF4** Formula One is attractive
- **IF5** I can identify myself with the Image of Formula One

**Brand Equity**
- **BE1** It makes sense to buy X instead of any other brand, even if they are the same
- **BE2** Even if another brand has the same features as X, I would prefer to buy X
- **BE3** If there is another brand as good as X, I prefer to buy X
- **BE4** If another brand is not different from X in any way, it seems smarter to purchase X

**Brand Awareness**
- **BA1** I can recognize X among other competing brands
- **BA2** Some characteristics of X come to my mind quickly
- **BA3** I can quickly recall the symbol or logo of X

**Attribute-based Image (Functional)**
- **F1** I can trust X
- **F2** I can rely on X
- **F3** X is a really dependable car
- **F4** Cars of Brand X last a long time
- **F5** Cars of Brand X are excellent in workmanship

**Non-attribute-based Image (Hedonic)**
- **H1** Cars of Brand X are good looking
- **H2** X builds cars with personality and character
- **H3** Cars of Brand X are sporty
- **H4** Cars of Brand X are attractive
- **H5** Cars of Brand X are desirable
- **H6** Cars of Brand X are young