



JÖNKÖPING INTERNATIONAL  
BUSINESS SCHOOL  
JÖNKÖPING UNIVERSITY

# City Branding

The effects of hosting sporting events: An empirical study of Singapore

Master's thesis within Business Administration

Author: Matthew Hansen & Yen Wiew Lee

Tutor: Clas Wahlbin

Jönköping May 2010

## Master's Thesis in Business Administration

Title: City Branding – The effects of hosting sporting events: An empirical study of Singapore

Author: Matthew Hansen & Yen Wiece Lee

Tutor: Clas Wahlbin

Date: 2010-05-27

Subject terms:

---

### Abstract

There is a growing amount of literature that investigates the various strategies and effects of city branding, but only a limited amount of research has been carried out pertaining to how sporting events can be used as a tool for city branding in a real-world setting. By conducting an empirical study of Singapore, this study aims to contribute to the ongoing discussion on city branding by identifying how evaluations of a city differ for certain dimensions of its overall brand when it hosts different sporting events and when there is a perceived match between different sporting events and a city. An important theoretical framework used in this study is the match-up theory. Dimensions used as the measurements of perception are chosen from the six dimensions used in the Anholt-GfK Roper City Brands Index.

Using a quantitative approach, the authors surveyed 200 students studying in South Korea, Thailand and Sweden to gather their perceptions of 4 dimensions of the city (short-term and long-term *Pulse* scores, pleasant travel and physical attractiveness *Place* scores), 2 dimensions (*Pulse* and *Place* scores) of 3 sporting events it hosts, and the level of perceived match between these sporting events and the city. The sporting events measured are high-profile events with international interest namely the AVIVA Open Singapore, the Singapore Grand Prix and the Volvo Ocean Race.

Pearson Bivariate Correlation, test of equality of means, and multiple linear regression analyses were performed. The results of the equality test of means between match and non-match groups are sensational as 10 of 12 models report significant differences in means at either 1% or 5% levels. Nevertheless, the results of the comprehensive multiple regressions are mixed. The perceived *Pulse* score for a sporting event has a positive and significant impact on the two perceived *Pulse* scores for Singapore in 4 of 6 models. Similarly, the perceived *Place* score for a sporting event has a positive and significant impact on the two perceived *Place* scores for Singapore in 5 of 6 models. The perceived match between a sporting event and a city positively affects the perceived long-term *Pulse* score for Singapore in 1 of 3 models and the two perceived *Place* scores for Singapore in 3 of 6 models at less than a 10% level of significance; it has no significant effect on the perceived short-term *Pulse* score and perceived pleasant travel *Place* score for Singapore. Thus, partial support to the match-up theory is found.

# Table of Contents

<b>I. Introduction</b> .....	<b>1-2.</b>
1.1 Importance of City Branding .....	1.
1.2 Singapore's Strategy .....	1-2.
<b>II. Problem</b> .....	<b>3.</b>
2.1 Problem Statement .....	3.
2.2 Purpose .....	3.
<b>III. Frame of Reference</b> .....	<b>4-8.</b>
3.1 Previous Research .....	4.
3.2 Anholt-GfK Roper City Brands Index (Anholt CBI) .....	5.
3.3 Adaptation of Anholt CBI.....	6.
3.4 Match-up Theory.....	6-7.
3.5 Relevance of Match-up Theory .....	7.
3.6 Acknowledged Criticisms of Match-up Theory .....	8.
3.7 Research Questions .....	8.
<b>IV. Method</b> .....	<b>9-12.</b>
4.1 Research Approach .....	9-10.
4.2 Survey Design .....	10-11.
4.3 Data Analysis.....	11-12.
<b>V. Results</b> .....	<b>13-17.</b>
5.1 Analysis of Equality of Means Between Match and Non-Match Groups.....	13.
5.2 Analysis of Perceived <i>Pulse</i> Scores for Singapore .....	14-15.
5.3 Analysis of Perceived <i>Place</i> Scores for Singapore .....	16-17.
<b>VI. Conclusion</b> .....	<b>18.</b>
<b>VII. Discussion</b> .....	<b>19-20.</b>
7.1 Theoretical Implications .....	19.
7.2 Practical Implications .....	19-20.
<b>References</b> .....	<b>21-23.</b>
<b>Appendices</b> .....	<b>24-31.</b>
Appendix 1 - Questionnaire .....	24-25.
Appendix 2 - List of Sporting Events 2008-2009.....	26.
Appendix 3 - Descriptive Statistics.....	27.
Appendix 4 - Pearson Bivariate Correlations .....	28.
Appendix 5 - List of Linear Regression Models.....	29.
Appendix 6 - Output Summary of Models with Perceived Match Coded as a Dummy Variable.....	30-31.

# 1 Introduction

*The aim of this chapter is to emphasize the importance of city branding and allow readers to witness a few examples of how certain cities are currently positioning themselves. This is followed by an overview of how Singapore is using sporting events as a tool to strengthen and modify attributes of its brand.*

## 1.1 Importance of City Branding

Accelerated and intensified globalization is forcing cities to compete at unprecedented levels for their share of attention, investment, visitors, shoppers, talent, events, and the like. According to Anholt (2006), it is crucial for political and business leaders of cities to understand and manage their brands accordingly in order to compete most effectively. Branding principles have been applied in virtually every setting where consumer choice of some kind is involved (Keller, 2002), and cities should be no exception. In support of this view, Ashworth and Kavaratzis (2009) suggest that a city brand can be used as an effective tool for cities to distinguish themselves from other cities and earn them a more favorable position in the increasingly competitive global market.

Visp, a city blessed with natural attractions, has long been positioning itself as an unforgettable Alps ski paradise; and Rome, with its widely recognized city landmarks like the Colosseum, has positioned itself as a place of glorious historical architecture. Other cities depend less on their natural attractions, historical monuments or rich heritage, and instead run more on corporate lines in positioning their brand. Among the many examples, Tokyo has been successfully positioning itself as a world-class technology center over the past 30 years; Los Angeles, a branded entertainment center, has been producing and exporting films worldwide with worldwide box office revenues reaching all-time highs in 2009 at \$29.9 billion (Motion Picture Association of America, 2010); and Sydney, by hosting the Olympic games in 2000, has become one of the most recognized cities in the world with an international awareness rate of 87 percent (Anholt, 2006).

Every city has a number of unique attributes that distinguish it from the next, and the examples mentioned above clearly exemplify the various ways a city can attempt to position itself. Whether a city attempts to brand itself using its natural attractions or hosts mega events to increase international awareness, the strategies employed could play a major role in how that city is seen in future and how successful it becomes as competition continues to intensify. Among the various approaches, a relatively underused positioning strategy has been to incorporate sporting events into the branding mix. This strategy, which is the focus of our study, is a process in which municipal governments deliberately exploit sport to modify the brand image of a city (Smith, 2005).

## 1.2 Singapore's Strategy

Singapore is a small island with less than 50 years of history as an independent country. Due to its shortage of natural attractions, historical architecture and heritage, it has traditionally built its brand around its corporate assets. On numerous occasions Singapore has been rated the most business-friendly economy

in the world (World Bank, 2007), and it is still considered to be one of the top centers of finance in the world (World Economic Forum, 2009). On the other hand, some visitors and potential visitors have been quoted as saying it is “staid, restrictive, boring, conservative, too strict with nothing much to do” and “an unexciting vacation choice” (Henderson, 2007). The Singaporean government has realized a need to strengthen various attributes of its overall brand, and in the past decade has employed several strategies to do just that.

One of the government’s current branding initiatives is to convince people that Singapore should be considered as a sports events destination and a preferred location for international and regional sports federations (Singapore Sports Council, 2006). Furthermore, the Singapore Sports Council (SSC) has the long-term goal of helping Singapore develop a self-sustaining sport culture with business investment initiating and funding many more industry-relevant programs and sporting events (Singapore Sports Council, 2008/2009). The ‘Sports Excellence’ strategies listed below exemplify Singapore’s over-strengthening commitment to developing a sporting culture (Singapore Sports Council, 2008).

- *Identify & invest in specific sports with medal potential*
- *Adopt a systematic long-term development plan for athletes*
- *Upgrade & expand the stock and capabilities of coaches*
- *Expand use of sports science & medicine to maximize performance*
- *Increase the opportunities for athletes to compete in international events overseas and in Singapore by hosting more world-class events locally*
- *Nurture national pride for athletes & coaches*

In alignment with SSC’s ‘Sports Excellence’ strategies, Singapore has been able to attract a number of high-profile sporting events and sport conferences in recent years. A few examples from its growing portfolio of sports investments are:

- *Singapore Grand Prix, Volvo Ocean Race, AVIVA Open (spectator events)*
- *Standard Chartered City Marathon, OCBC Cycle (participatory events)*
- *International Olympic Committee Bid Selection, Soccerex (sport conferences)*

Furthermore, Singapore has demonstrated its commitment to sport by developing a world-class Sports Hub, which is the first and largest sport facilities infrastructure Public-Private-Partnership project in the world (Singapore Sports Council, 2007/2008). The Sports Hub will be a rite of passage for Singapore’s position in the regional sporting arena and its potential impact on the national economy.

## **2 Problem**

*The purpose of this chapter is to introduce the reader to the problem this paper will address, and then more precisely what the authors intend to investigate in their empirical study of Singapore.*

### **2.1 Problem Statement**

As cities like Singapore look to strengthen or modify their city brands by investing in sport, it is important to fill the current gap in scientific knowledge as it relates to this strategy. In the past decade there has been a growing academic interest in city branding. Furthermore, a number of researchers (Bourdieu, 1997; Euchner, 1999; Gospodini, 2006; Yuen, 2006) emphasize how sport can be used as a tool to reinforce place promotion and economic development. Singapore has invested considerably in sport, and this commitment could potentially strengthen or modify its city brand. For cities like Singapore who adopt this strategy, it is important for city leaders and other stakeholders to be knowledgeable of the potential effects that sport investment could have on their brands. To develop a deeper understanding of these potential effects and how sport investments can be managed more strategically to achieve branding objectives, we will address this problem in our research.

### **2.2 Purpose**

The specific aspect of the problem we will treat in our investigation is how hosting different spectator sporting events might affect evaluations for certain brand attributes of the host city. The purpose of our research is both evaluative and explanatory. By conducting an empirical study of Singapore, we aim to see how evaluations differ for certain attributes of Singapore's city brand when it hosts different sporting events and when there is a perceived match between sporting events and the city. The results will contribute to the ongoing discussion on city branding and enable city leaders and other stakeholders to make more informed decisions when deciding which spectator sporting events to host when attempting to strengthen or modify their city brands.

### 3 Frame of Reference

*The purpose of this chapter is to introduce the reader to previous research pertaining to city branding. Furthermore, it will introduce relevant theoretical frameworks that will serve as reference to the authors in collecting and interpreting data in their empirical study of Singapore.*

#### 3.1 Previous Research

In recent years, scholars and researchers have been developing theories and frameworks to fill the gap in scientific knowledge of city branding. The known studies pertaining to city branding, and more specifically city branding and sport, are introduced below.

Xing and Chalip (2006) examined the effects of hosting sporting events on destination brand by testing co-branding and match-up theory. Results show that inclusion of a sporting event in a destination ad increases the perceived activeness of a destination regardless of the perceived activeness of the event. The results also show pairing an active event with an active city enhances evaluations of a destination, pairing an active event with a leisurely city depresses evaluations of a destination, pairing a leisurely event with a leisurely city does not enhance the evaluation of a destination, and pairing a leisurely event with an active city enhances the evaluation of a destination.

Rein and Shields (2007) analyzed different sport related place branding possibilities for emerging, transitional, negatively viewed and newly industrialized nations. Their research led them to believe that places hosting sporting events typically receive widespread media coverage in which valuable visibility helps attract tourists, residents and visitors. They also discussed how sports teams representative of a place are capable of symbolizing energy and vigor that creates an emotional heat with their audiences, which could serve a place well when defining or repositioning its brand. In conclusion, they suggest that any place looking to undertake a sport related place branding transformation must think of its sports brand as a concept and make sure it is attractive over the long-term.

Kavaratzis (2009) compared several frameworks for managing city brands, including his own framework of city-brand communication (2004), Rainisto's success factors of place marketing (2003), Hankinson's conceptual model of place brands (2004), Trueman and Cornelius' place branding toolkit (2006), and Anholt's City Brand Hexagon. He then integrated the different frameworks to suggest 8 components that city brand management should include – *Vision and Strategy, Internal Culture, Local Communities, Synergies, Infrastructure, Cityscape and Gateways, Opportunities and Communications*. However, the applicability and practical value of this new framework was not tested in his study.

Zhang and Zhao (2009) examined the effectiveness of China's efforts to re-brand Beijing through the Olympics. Their research included an analysis of the official branding strategies and an attitudinal survey of people's understanding of Beijing. They found that the core values promoted by the government during the Olympics did not match people's experiences of Beijing, and for the most part unfavorable

perceptions of the city were unchanged. Although the Beijing Olympics were seen as a success in many ways, Zhang and Zhao conclude that city branding is a long-term process and that branding goals cannot be effectively achieved through a single event.

### **3.2 Anholt-GfK Roper City Brands Index (Anholt CBI)<sup>1</sup>**

The Anholt CBI is derived from a survey that has been conducted annually since 2006. The study is fielded in 20 countries and measures how consumers across the globe feel about 50 key cities to better understand the projected brand of each location. The cities represented come from major developed and developing countries that play important and diverse roles in the flow of business, culture and tourism. There are typically around 500 respondents in each panel country, and around 10,000 in the survey as a whole. The questionnaire consists of 15 principal questions – either two or three for each dimension. All of the questions contain scales from 1-5. The questions produce quantitative results that lead to an average score between 1 and 5 for each question.

The six dimensions measured in the Anholt CBI are:

*Presence* - Presence is all about the city's international status and standing. In this section, the survey asks how familiar people are with each of the cities in the survey and whether each city has made an important contribution to the world in culture, science, or in the way cities are governed, during the last 30 years.

*Place* - Place explores people's perceptions about the physical aspects of each city: how pleasant or unpleasant they imagine it is to be outdoors and to travel around the city, how attractive it is, and what the climate is like.

*Pulse* - The appeal of a vibrant urban lifestyle is an important part of each city's brand image. In this section, the survey asks how easy people think it would be to find interesting things to do, both as a short-term visitor and as a long-term resident.

*Prerequisites* - This is the section where the survey asks people about their basic requirements of a city: how easy they think it would be to find satisfactory, affordable accommodation, and what they believe the general standard of public amenities is like – schools, hospitals, public transport, sports facilities, and so on.

*People* - This section of the survey asks whether respondents think the inhabitants would be warm and friendly, or cold and prejudiced against outsiders. It asks if they think it would be easy to find and fit into a community that shares their language and culture. Finally, it asks how safe the panelists think they would feel in the city.

---

<sup>1</sup> Details concerning the methodology of the Anholt GfK City Brand index were extracted from <http://www.mynewsdesk.com/se/view/pressrelease/gfk-roper-and-anholt-city-brands-index-287066>



*Potential* - Potential considers the economic opportunities that each city is believed to offer. Here the survey asks the panelists how easy they think it would be to find a job in the city, and if they had a business, how good a place they think it would be to do business in. Finally, the survey asks whether each city would be a good place for them or other family members to get a higher educational qualification.

### **3.3 Adaptation of Anholt CBI**

The Anholt CBI measures people's perceptions of different cities, not pure knowledge of them. As Anholt states "unless one has lived in a particular city or has a good reason to know a lot about it, the chances are that one thinks about it in terms of a handful of qualities or attributes, a promise, some kind of story" (2006). In the same sense, people have certain perceptions of sporting events. Unless they participate in or regularly attend a number of sporting events, one might assume that they also think of different sporting events in terms of a handful of qualities or attributes. To gather needed information from our subjects about perceptions of Singapore and the different sporting events it hosts, the Anholt CBI will be used to aid the design of our investigation.

When measuring people's perceptions of Singapore and the sporting events it hosts, we will gather responses from our subjects using questions similar to those used in the Anholt CBI survey for dimensions that are identical to those in the Anholt CBI. However, as only certain dimensions are relevant to both city and sporting event, we have chosen to elicit responses for 2 of 6 dimensions seen as most relevant to both – *Pulse* and *Place*. *Pulse* is used by Anholt to measure how exciting a city is, which is also an attribute that can certainly be associated with sporting events. *Place* is used to measure how pleasant and attractive the physical surroundings of a city are, which are also attributes that can certainly be used to evaluate different sporting events.

The Anholt CBI is the most comprehensive city brands study to date, both in terms of the number of responses it gathers and the dimensions it measures. Anholt has been recognized as the world's leading authority on the identity, image and reputation of countries, regions and cities, and now works as an advisor to more than 40 national, regional and city governments on identity policy (GfK America, 2009). His survey is widely recognized and has been used by other researchers (Kavaratzis, 2009; Zhang and Zhao, 2009) as a basis for further research pertaining to city branding. Using the Anholt CBI as part of our framework not only lends credibility to our research on city branding, but also allows similar research to be carried out in different cities hosting different types of sporting events.

### **3.4 Match-up Theory**

In academic research the perceived fit or match between endorser and product has been described as the match-up theory (Kahle & Homer, 1985; Kamins, 1990; Lynch & Schuler, 1994). Misra and Beaty (1990) define a successful match-up

hypothesis as one where the highly relevant characteristics of the source are consistent with the highly relevant attributes of the brand.

The match-up hypothesis was first used to determine whether an attractive model was universally effective as an endorser for all products. The results show that this approach works better for products that are beauty related (Baker and Churchill, 1977; Joseph 1982; Kahle and Homer, 1985). This research gives support to the idea that the product must fit the image of the endorser in order for the advertisement to achieve the desired effect. Kamins (1990) found that using a celebrity that fits with an advertisement for a luxury car results in a more positive attitude towards the ad. Misra and Beatty (1990) discovered that a fit between endorsers and various products results in a more positive attitude towards the brand.

The match-up hypothesis was later used in research pertaining to services and corporate sponsorship. Koernig and Page (2002) found that people have more trust in their hairdresser if he or she is physically attractive. Stafford et al. (2002) found that if a certain celebrity were used in an ad for a restaurant, attitudes towards the advertisement would be better than if the same celebrity were used to endorse a bank. They suggested that this was due to a better perceived match between the celebrity and the restaurant. McDaniel (1999) found that if Toyota were to sponsor the US Olympic Team, attitudes towards the brand would be better than if it were to sponsor an NHL Hockey Team. He claimed that this was the result of a better perceived match between Toyota and the US Olympic Team.

Most recently Xing and Chalip (2006) further extended the concept of the match-up hypothesis by pairing different sporting events and cities in advertisement. Several selected cities and events were predetermined as being either active or leisurely in order to construct ads that matched or mismatched in terms of this measure. The purpose was to see whether different pairings would affect a respondent's intention to visit each of the different cities. The results show pairing an active event with an active city enhances evaluations of a destination, pairing an active event with a leisurely city depresses evaluations of a destination, pairing a leisurely event with a leisurely city does not enhance the evaluation of a destination, and pairing a leisurely event with an active city enhances the evaluation of a destination.

### **3.5 Relevance of Match-up Theory**

The match-up hypothesis, as used in the various settings described earlier, suggests that match of certain important attributes between endorser or sponsor (sporting event in our research) and product or service (city in our research) leads to a more positive evaluation of advertisement or brand (city brand in our research). By asking respondents how well different sporting events match the city of Singapore, we can investigate their effects on evaluations for both *Pulse* and *Place* scores for the city. The match-up theory will be used to aid the design of our investigation. Furthermore, it will be used to interpret and make sense of our results by either lending support to the match-up theory, or alternatively by validating some of the common criticisms it has received (see below).

### **3.6 Acknowledged Criticisms of Match-up Theory**

Although the match-up theory serves as a valuable frame of reference to our research, we must acknowledge some of the criticisms it has received over the years. However, it should also be noted that the perceived weaknesses or limitations of the match-up theory only limit the assumptions we can make before carrying out our research, not the results and discussions that will follow. Two major criticisms are listed below.

1. In some studies the match-up theory tends to be polarized into 'match' or 'mismatch'. However, brand managers are often faced with the challenge of selecting the right celebrity among many whom they perceive to match the product or brand, which then forces them to make trade offs between choices based on a degree of match. When determining which sporting events to host, those managing a city brand would face the same predicament. Ang and Dubelaar (2006) criticized the theory for sometimes being too simplistic in this sense, as it fails to recognize the varying degrees of match.

2. Match-up theory also implies that using a celebrity to reposition a brand would never be successful. As Kaikati (1987) suggests, one of the key reasons for using celebrity endorsements is to be able to reposition a brand. Xing and Chalip (2006) also discussed the limitations of the match-up theory when applying it to cities looking to re-position their brands by incorporating different sporting events into their marketing mix. Again, the theory has come under some criticism for failing to recognize that some incongruence (or mismatch) could lead to a more positive evaluation of the advertisement or brand.

### **3.7 Research Questions**

The four main research questions are formulated as follows:

Q1. How does the perceived *Pulse* score for a sporting event affect the perceived *Pulse* scores for a city?

Q2. How does the perceived *Place* score for a sporting event affect the perceived *Place* scores for a city?

Q3. How does the perceived match between a sporting event and a city affect the perceived *Pulse* scores for a city?

Q4. How does the perceived match between a sporting event and a city affect the perceived *Place* scores for a city?

## 4 Method

*This chapter provides a detailed portrayal of the choice of method used in the research. Motivation of the research approach chosen, process of data collection and types of statistical analysis will be explained in detail.*

### 4.1 Research Approach

Most of the existing research using the match-up theory was conducted in an experimental setting by manipulating extraneous variables that might potentially affect the dependent variable. Common approaches keep control variables constant or allow randomization in order to generate high interval validity. However, this approach often results in low ecological validity, in other words, the research results can be difficult to apply in a real-world situation. Furthermore, the match-up theory fails to capture the effect of the degree of fit and offers no explanation of what 'fit' actually means (Ang & Dubelaar, 2006). Our research aims to overcome the drawbacks mentioned earlier by conducting an empirical study in a non-experimental setting to test the effect of the degree of perceived match between a sporting event and a city on the perceptions of the city. Two dimensions used in the Anholt CBI (*Pulse* and *Place*) were incorporated in the survey design to measure the dimensions found to be relevant to both sporting events and the city.

In order to identify how hosting different spectator sporting events might affect evaluations for certain brand attributes of Singapore, primary quantitative data was collected using an online survey. Responses were gathered from a total of 200 students studying in South Korea, Thailand, and Sweden. The survey had them evaluate several attributes of the city, several attributes of sporting events it hosts, and the perceived match between the different sporting events and the city.

The online survey of a larger sample was chosen rather than in-depth interviews of a smaller sample, as gathering a large number of responses produced balanced data to work with in our analysis. Before gathering the empirical data used in this study, a pre-test survey was used on a smaller sample of colleagues in Sweden. The responses showed that respondents of different gender and nationality had varying perceptions of different sporting events in terms of how exciting or pleasant they would be for them as spectators. Also, those who had previously visited Singapore had slightly different perceptions of the city than those who had not. Subsequently, we introduced several control variables namely age, gender, nationality and whether or not people have ever visited Singapore to our equation model (see Data Analysis section for further explanation).

Initially we intended to interview 200 visitors in Singapore's Changi International Airport, however, the request to conduct our research was denied by the ruling airport authorities due to security concerns and on-going research being conducted simultaneously by the airport. Next, we requested to interview 200 visitors at different Singapore Visitors Centers around the city of Singapore, but the request was again rejected as there was other research being conducted during our research period. Finally, we decided to conduct an online survey in cooperation with 3 different universities in Asia and Europe (Dongguk University,

South Korea; Chulalongkorn University, Thailand; and Jönköping University, Sweden) to gather responses from 200 students.

At Dongguk University, a professor in the English Literature Department was contacted to send requests around to all of his students that are highly proficient in English. At Chulalongkorn University, the Student Coordinator for the Faculty of Commerce & Accountancy was contacted to send requests to all students in the faculty currently enrolled in English degree programs. At Jönköping University, our request to send a mass e-mail around to all students in our school was refused. As an alternative, our classmates were contacted by e-mail and encouraged to forward our request to other students at the university. After the initial request, reminders were sent to the same groups every few days until the target number of responses was reached.

The alternative approach of selecting university students as our sample is highly relevant for four main reasons. Firstly, most individuals in this group are likely to have some knowledge of Singapore and the sporting events, hence their perceptions towards the degree of perceived match between sporting events and the city would be more reliable. Secondly, the individuals in this group will certainly play a key role in the flow of business, culture and tourism in future, which makes them ideal visitors of Singapore, hence their perceptions are highly relevant. Thirdly, the sample gives us a mix of nationalities that enabled us to investigate how their perceptions of the city, various sporting events, and the degree of perceived match between sporting events and the city differ. Lastly, by gathering responses in a number of different countries with differing proximities to Singapore, we could gather responses from those who have visited Singapore and others who have not visited Singapore.

## 4.2 Survey Design

An online survey was used as the main source of primary data as it could be distributed to a vast number of people simultaneously across different countries. A total of 14 questions were created with each question set as 'mandatory', which means that the respondents would not be able to submit the survey if there was any question left unanswered. This setting was used ensure there were no missing answers for any of the 14 questions.

The first part of the survey was designed to capture demographic information namely nationality, gender and age. The first question asks if the respondent has ever visited Singapore. All the following questions use a 5-point likert scale. 6 questions were designed to gather data concerning *Pulse* and *Place* for three different sporting events, the independent variables in our analysis. The next 4 questions were designed to gather data concerning *Pulse* and *Place* for Singapore, the dependent variables in our analysis. The last 3 questions were designed to gather data concerning the degree of perceived match between the three chosen sporting events and Singapore, which were used as independent variables in our analysis. (Refer to Appendix 1 - Questionnaire)

As mentioned earlier in the report, *Pulse* and *Place* were the two dimensions included in the survey, as they were the only dimensions used in the Anholt CBI

found to be relevant to both sporting events and cities. The three different sporting events included in the survey were chosen from Singapore's current portfolio of sporting events for several reasons<sup>2</sup>. Firstly, all three events are major international sporting events that are more likely to have a significant impact on city brands when compared to low-profile local sporting events. Secondly, all three events were seen to vary considerably in terms of *Pulse* and *Place*. The pre-test survey described earlier showed that the Singapore Grand Prix (F1) had a consistently high *Pulse* score, the Volvo Ocean Race (VOLVO) had a consistently high *Place* score, and the AVIVA Open Singapore (AVIVA) consistently had low scores for both measures.

### 4.3 Data Analysis

The objective of our research is to investigate how the perceived score of dimension for a sporting event, and the perceived match between a sporting event and a city affect the perceived scores of dimensions for a city.

For most of the academic studies conducted in an experimental setting, the researcher can control the situation of the experiment by keeping the other variables that might potentially affect the dependent variable constant or allowing random variation. For instance, a researcher can choose to either specifically assign a sporting event to the respondents based on pre-determined criteria or randomly assign any sporting event to the respondents. Hence, a reader can reasonably believe there is a significant difference in means between the two groups when the result of the mean equality test is statistically significant at either the 1% or 5% levels. However, one cannot be convinced of the significant finding when the statistical data are collected in a real-world setting where the researcher cannot control any correlation between variables. Additional analysis, for instance multiple regressions, can then be performed to identify a set of independent variables that can explain the variation in the dependent variable.

We first performed independent samples t-tests to compare the means of four perceived scores of dimensions for Singapore of people who perceived there is a match between the different sporting events and Singapore and those who perceived non-match (neutral or no match) between the different sporting events and Singapore. The result of the mean equality test for match and non-match groups will be analyzed in the following chapter.

Subsequently, we performed 12 multiple regression analyses that included several control variables that could potentially affect the dependent variable. The general linear regression model is as follows:

$$\text{Perceived score of Dimension}_i \text{ for Singapore} = \beta_0 + \beta_1 \text{ Age} + \beta_2 \text{ CounDum} + \beta_3 \text{ GenDum} + \beta_4 \text{ VisitDum} + \beta_5 \text{ Perceived score of dimension}_j \text{ for sporting event}_k + \beta_6 \text{ Perceived match between sporting event}_k \text{ and Singapore} + \varepsilon$$

---

<sup>2</sup> Appendix 2 presents a list of sporting events held in Singapore in 2008/2009, which was obtained from the Singapore Sports Council's Annual Report 2008/2009.

<b>Variable</b>	<b>Definition</b>
Dimension <sub>i</sub> for Singapore	i=short-term <i>Pulse</i> , long-term <i>Pulse</i> , pleasant travel <i>Place</i> , physical attractiveness <i>Place</i>
Dimension <sub>j</sub> for sporting event	j= <i>Pulse</i> , <i>Place</i>
Sporting event <sub>k</sub>	k=AVIVA, F1, VOLVO

Short-term and long-term *Pulse* scores for Singapore are dependent variables used to measure the excitement of the city. Alternatively, pleasant travel and physical attractiveness *Place* scores for Singapore are dependent variables used to measure the perceived atmosphere of the city. The 12 linear regression models use the scale measurement of one to five for the perceived match between sporting event and the city (see Appendix 5 – List of linear regression models).

CounDum, GenDum, and VisitDum are dummy variables, which are used to measure the demographical impact on people’s perceptions of Singapore’s city brand. Due to the sample distribution, nationality is transformed to a dummy variable that is denoted by CounDum which categorizes nationalities into Asia and Non-Asia which takes on a value of one for Asia, and zero otherwise; GenDum is a gender dummy variable which takes on a value of one for female, and zero for male; VisitDum is whether or not the respondent has ever visited Singapore which takes on a value of one for visited, and zero otherwise. We present summary descriptive statistics of all the variables in Appendix 3.

We also performed Bivariate Correlation analyses using Pearson Correlation for all the dependent and independent variables. The results show that most of the variables correlate to each other at statistically significant levels of 0.01 or 0.05. Appendix 4 presents the Pearson Bivariate Correlation results.

To test for robustness, we performed another set of multiple regression analyses by replacing the scale measurement of perceived match between a sporting event and the city with a dummy variable which takes the value of zero for 1,2,3 (perceived non-match) and one for 4,5 (perceived match). The results for both sets of multiple regression analyses are consistent. We will only discuss the statistical results of the regression models where the perceived match uses the scale measurement. For the output summary of models with perceived match coded as a dummy variable please refer to Appendix 6.

## 5 Results

*The purpose of this chapter is to present and analyze the statistical results gathered from the online survey.*

### 5.1 Analysis of Equality of Means Between Match and Non-Match Groups

Table 1 – Output Summary of the Equality Test of Means Between Match and Non-Match Groups

	AVIVA & Singapore			F1 & Singapore			VOLVO & Singapore		
	Match (52)	Non-match (148)	t-statistic	Match (93)	Non-Match (107)	t-statistic	Match (88)	Non-match (112)	t-statistic
Perceived short-term <i>Pulse</i> score for Singapore	4.08	3.91	1.15	4.10	3.82	2.056**	4.14	3.80	2.488**
Perceived long-term <i>Pulse</i> score for Singapore	3.44	2.86	3.62***	3.14	2.90	1.61	3.26	2.81	3.026***
Perceived pleasant travel <i>Place</i> score for Singapore	4.00	3.66	2.443**	3.92	3.59	2.569**	3.98	3.56	3.177***
Perceived physical attractiveness <i>Place</i> score for Singapore	3.79	3.50	1.997**	3.83	3.36	3.495***	3.86	3.35	3.811***

\*\*\* 1%, \*\* 5%, \* 10% significance levels

In the simplest interpretation of the match-up theory, which has received some prior criticism, the mean scores for perceived scores of dimensions for Singapore should all be higher when respondents perceive the sporting event to match the city.

To be on the conservative side, we assume the variances of match and non-match groups are not equal. The statistical results show that 10 of 12 tests give significant differences between the match and the non-match groups at either the 1% or 5% levels. Respondents who perceived there is a match between the sporting events and the city give higher means scores for perceived scores of dimensions for Singapore as compared to those who perceived non-match between the sporting events and the city.

These sensational results could be due to the fact that the research was conducted in a non-experimental setting where any other variables that could affect the perceptions of the city were not controlled. In other words, there might be correlation between the variables; for example, respondents who gave a higher perceived score of dimension for sporting event would probably give a higher perceived match between sporting event and Singapore, and perceived score of dimension for Singapore.

Subsequently, we conducted multiple regression analyses in the following section to find out if there are any significant associations between the dependent and independent variables. In this case, we are interested in finding out if there are



changes in the perceived score of dimension for Singapore (dependent variable) depending on the degrees of perceived match between sporting event and Singapore, and perceived score of dimension for sporting event (independent variables).

## 5.2 Analysis of Perceived *Pulse* Scores for Singapore

Table 2 – Output Summary of Perceived *Pulse* Scores for Singapore as Dependent Variables

Perceived short-term <i>Pulse</i> score for Singapore						
	Model 1 (AVIVA)		Model 2 (F1)		Model 3 (VOLVO)	
	Unstandardized Coefficient	t-statistic	Unstandardized Coefficient	t-statistic	Unstandardized Coefficient	t-statistic
Constant	2.364	3.669***	2.648	4.239***	2.380	3.793***
Age	0.052	2.098**	0.037	1.425	0.043	1.763*
Country	-0.305	-1.882*	-0.189	-1.194	-0.214	-1.372
Gender	0.165	1.213	0.220	1.567	0.126	0.943
Visited	-0.173	-1.130	-0.266	-1.762*	-0.187	-1.253
<i>Pulse</i> AVIVA	0.164	2.654***				
<i>Pulse</i> F1			0.094	1.472		
<i>Pulse</i> VOLVO					0.182	3.035***
Perceived match AVIVA & SG	0.049	0.589				
Perceived match F1 & SG			0.075	0.952		
Perceived match VOLVO & SG					0.051	0.740
Adjusted R-square	0.077		0.060		0.095	
F-ratio	3.754***		3.107***		4.487***	
Perceived long-term <i>Pulse</i> score for Singapore						
	Model 4 (AVIVA)		Model 5 (F1)		Model 6 (VOLVO)	
	Unstandardized Coefficient	t-statistic	Unstandardized Coefficient	t-statistic	Unstandardized Coefficient	t-statistic
Constant	1.305	1.946*	2.258	3.3***	1.753	2.58**
Age	0.043	1.661*	0.031	1.115	0.033	1.232
Country	-0.500	-2.964***	-0.272	-1.571	-0.295	-1.753*
Gender	-0.149	-1.048	-0.147	-0.953	-0.232	-1.602
Visited	-0.287	-1.804*	-0.453	-2.734***	-0.358	-2.209**
<i>Pulse</i> AVIVA	0.238	3.699***				
<i>Pulse</i> F1			0.101	1.450		
<i>Pulse</i> VOLVO					0.177	2.722***
Perceived match AVIVA & SG	0.196	2.254**				
Perceived match F1 & SG			0.030	0.354		
Perceived match VOLVO & SG					0.119	1.599
Adjusted R-square	0.203		0.101		0.155	
F-ratio	9.47***		4.731***		7.105***	

\*\*\* 1%, \*\* 5%, \* 10% significance levels

All the regression models have F-ratios that are significant at a 1% level. In other words the models for both short-term and long-term *Pulse* scores for Singapore have statistically significant predictive capability. The models for long-term *Pulse*

have relatively higher explanatory power than the models for short-term *Pulse* which is evidenced by higher adjusted R-square values of long-term *Pulse* models ranging from 0.101 to 0.203 as compared to short-term *Pulse* models ranging from 0.060 to 0.095.

The perceived match between the different sporting events and Singapore is significant for 1 of 6 models; it has no significant effect on the perceived short-term *Pulse* score for Singapore though it reports positive estimated coefficients for all the regression models. The perceived match between AVIVA and Singapore is significant to the perceived long-term *Pulse* score for Singapore at a 5% level with an estimated coefficient of 0.196. Thus, the match-up theory gets some but not strong support from our statistical results that a higher perceived match between a sporting event and a city increases the perceived *Pulse* scores for a city.

The perceived *Pulse* scores for the different sporting events yield mixed results. They are significant at a 1% level for 4 of 6 models and report positive estimated coefficients for all the regression models. For instance, the perceived *Pulse* score for VOLVO has a t-statistic of 2.722 with an estimated coefficient of 0.177 for the perceived long-term *Pulse* score for Singapore. An increase in the perceived *Pulse* score for VOLVO by one will have a positive impact of 0.177 to the perceived long-term *Pulse* score for Singapore. Hence, the results suggest that perceived *Pulse* score for a sporting event positively affects the perceived *Pulse* scores for Singapore in some cases.

In addition to the main statistical findings mentioned above, we discovered several control variables that are statistically significant to the dependent variable as a result of real-world research. Age is statistically significant in 3 of 6 models with positive estimated coefficients ranging from 0.043 to 0.052. 75% of the respondents are between the ages of 18 to 28. The results suggest that a one-year increase in age difference will increase the perceived *Pulse* score for Singapore by 0.043 to 0.052, holding all the other independent variables constant.

Country is statistically significant in 3 of 6 models with negative estimated coefficients between -0.295 to -0.500. The results suggest that people from Asia are expected to give a lower perceived *Pulse* score for Singapore, holding all the other independent variables constant. The result might be due to geographical proximity, as traveling within the same continent could be less exciting than visiting a different continent.

Visited is statistically significant in 4 of 6 models with negative estimated coefficients ranging from -0.266 to -0.453. The results suggest that people who have visited Singapore give a lower *Pulse* score for Singapore, holding all the other independent variables constant. This might not be the result of an unexciting experience in Singapore, but more a result of familiarity. These respondents might perceive Singapore as small country that is limited in what it can continuously offer visitors.

### 5.3 Analysis of Perceived *Place* Scores for Singapore

Table 3 – Output Summary of the Perceived *Place* Scores for Singapore as Dependent Variables

Perceived pleasant travel <i>Place</i> score for Singapore						
	Model 7 (AVIVA)		Model 8 (F1)		Model 9 (VOLVO)	
	Unstandardized Coefficient	t-statistic	Unstandardized Coefficient	t-statistic	Unstandardized Coefficient	t-statistic
Constant	1.790	2.815***	2.146	3.452***	1.501	2.464**
Age	0.039	1.590	0.024	0.928	0.033	1.399
Country	-0.101	-0.639	0.025	0.159	0.076	0.514
Gender	0.238	1.778*	0.333	2.417**	0.258	2.018**
Visited	-0.075	-0.508	-0.149	-0.995	-0.053	-0.376
<i>Place</i> AVIVA	0.292	4.09***				
<i>Place</i> F1			0.177	2.507**		
<i>Place</i> VOLVO					0.358	5.47***
Perceived match AVIVA & SG	0.057	0.709				
Perceived match F1 & SG			0.092	1.210		
Perceived match VOLVO & SG					0.027	0.407
Adjusted R-square	0.094		0.064		0.162	
F-ratio	4.426***		3.249***		7.399***	
Perceived physical attractiveness <i>Place</i> score for Singapore						
	Model 10 (AVIVA)		Model 11 (F1)		Model 12 (VOLVO)	
	Unstandardized Coefficient	t-statistic	Unstandardized Coefficient	t-statistic	Unstandardized Coefficient	t-statistic
Constant	1.261	1.919*	1.814	2.837***	1.320	2.012**
Age	0.053	2.113**	0.034	1.284	0.050	1.973**
Country	-0.205	-1.252	-0.055	-0.342	-0.006	-0.040
Gender	0.083	0.598	0.156	1.103	0.054	0.391
Visited	-0.144	-0.948	-0.202	-1.311	-0.150	-0.980
<i>Place</i> AVIVA	0.224	3.04***				
<i>Place</i> F1			0.095	1.311		
<i>Place</i> VOLVO					0.205	2.906***
Perceived match AVIVA & SG	0.191	2.301**				
Perceived match F1 & SG			0.207	2.633***		
Perceived match VOLVO & SG					0.133	1.881*
Adjusted R-square	0.107		0.085		0.102	
F-ratio	4.971***		4.092***		4.762***	

\*\*\* 1%, \*\* 5%, \* 10% significance levels

All the regression models have F-ratios that are significant at a 1% level. The models for pleasant travel and physical attractiveness *Place* have similar adjusted R-square values ranging from 0.064 to 0.162.

The perceived match between the different sporting events and Singapore is significant for 3 of 6 models and concentrated on the perceived physical attractiveness *Pulse* score for Singapore. The perceived match between AVIVA and Singapore, between F1 and Singapore, and between VOLVO and Singapore are

statistically significant at 5%, 1% and 10% levels with positive estimated coefficients of 0.191, 0.207 and 0.133 respectively. Thus, the statistical result supports the match-up theory in half of the cases that a higher perceived match between a sporting event and a city increases the perceived *Place* scores for a city.

The perceived *Place* scores for the different sporting events are significant for 5 of 6 models. The perceived *Place* score for AVIVA is significant at a 1% level for both perceived pleasant travel and physical attractiveness *Place* scores for Singapore with positive estimated coefficients of 0.292 and 0.224 respectively. The perceived *Place* score for F1 is significant at a 5% level for perceived pleasant travel *Place* score for Singapore with a positive estimated coefficient of 0.177. The perceived *Place* score for VOLVO is significant at a 1% level for both perceived pleasant travel and physical attractiveness *Place* scores for Singapore with positive estimated coefficients of 0.352 and 0.205 respectively. Hence, the results suggest that different types of sporting events tend to positively affect the perceived *Place* score for Singapore.

Similar to the statistical results of the perceived *Pulse* score for Singapore, we discovered several control variables that are statistically significant to the perceived *Place* score for Singapore namely age and gender. Age is statistically significant at a 5% level in 2 of 6 models with positive estimated coefficients of 0.053 and 0.050. Gender is statistically significant in 3 of 6 models and concentrated in the perceived pleasant travel *Place* score for Singapore. The results suggest that females tend to be more positive on the perceived pleasant travel *Place* score for Singapore as can be seen by the positive estimated coefficients ranging from 0.238 to 0.333.

## 6 Conclusion

As cities like Singapore look to strengthen or modify their city brands by investing in sport, it is important to fill some of the gaps in scientific knowledge as it relates to this strategy, so that city leaders and other stakeholders can be more knowledgeable of the potential effects that sport investment can have on their brands. The purpose of our empirical study of Singapore was to identify how hosting different spectator sporting events might affect evaluations for certain brand attributes of the host city.

The first research question is how the perceived *Pulse* score for a sporting event affects the perceived *Pulse* scores for a city. Our results show that 4 of 6 models are significant at a 1% level to the perceived *Pulse* scores for Singapore. The perceived *Pulse* scores for all sporting events report positive estimated coefficients. Hence, we conclude that the perceived *Pulse* score for a sporting event positively affects the perceived *Pulse* score for a city holding other variables constant.

The second research question is how the perceived *Place* score for a sporting event affects the perceived *Place* scores for a city. As shown in our results, 5 of 6 models are significant at 1% and 5% levels to the perceived *Place* scores for Singapore. The perceived *Place* scores for all sporting events report positive estimated coefficients. Therefore, we conclude that the perceived *Place* score for a sporting event positively affects the perceived *Place* score for a city holding other variables constant.

The third research question is how the perceived match between a sporting event affects the perceived *Pulse* scores for a city. Our results show that 1 of 6 models is significant at a 5% level to the perceived *Pulse* score for Singapore with an estimated coefficient of 0.196. Hence, the match-up theory gets some but weak support from our statistical results that the perceived match between a sporting event positively affects the perceived *Pulse* scores for a city.

The final research question is how the perceived match between a sporting event affects the perceived *Place* scores for a city. Our statistical tests yield mixed results. 3 of 6 models are significant at 1%, 5% and 10% levels to the perceived *Place* scores for Singapore. Thus, our results partially support the match-up theory that the perceived match between a sporting event and a city positively affects the perceived *Place* scores for a city.

All in all, we obtain support for the match-up theory in 4 of 12 models in a real-world setting. These statistical findings can be compared to other existing studies mentioned by Ang and Dubelaar (2006), who report that of the five studies that had brand attitude as an outcome measure, two gave significant results (Kahle and Homer 1985; Misra and Beatty 1990), two did not (Kamins 1990; McDaniel 1999), and one gave mixed results (Kamins and Gupta 1994).

In addition to the above findings, we discovered that some components namely age, country, gender and whether or not people have ever visited a country seem to play a significant role in explaining people's perception of a city. Future research needs to be carried out to examine the impact of these components on the perceived image of a city.

## 7 Discussion

*The purpose of this chapter is to discuss some detailed insights that do not relate specifically to the research questions that guided the authors, but further explain the match-up theory and how sporting events can be used as a tool for city branding.*

### 7.1 Theoretical Implications

When looking at previous research conducted using the match-up theory, it can be interpreted in two different ways. The first suggests that when the source is seen to match the ad or brand, the evaluation of that ad or brand should be higher than if it did not match. The second suggests that the more the source is seen to match the ad or brand, the more the evaluation of that ad or brand should increase. When using the match-up theory in a real-world setting as opposed to the experimental settings it has previously been tested in, and when using sporting events as the source and dimensions of city brand as the brand, some relevance of the theory was shown in both interpretations.

In the more complex interpretation of the match-up theory, which was used in our research, the perceived match between AVIVA, F1, and VOLVO and Singapore should all have a positive implication on the perception of the city. When putting this hypothesis to the test, results are mixed. The perceived match between different sporting events and Singapore does not have a significant positive implication on the perceived short-term *Pulse* for Singapore. Only the perceived match between AVIVA and Singapore has a positive impact to the perceived long-term *Pulse* for Singapore. Furthermore, none of the perceived matches between the sporting events and Singapore reports a significant positive implication on the perceived pleasant travel *Pulse* score for Singapore.

According to the theory, this is perhaps because short-term *Pulse* and pleasant travel *Place* scores for a city are not highly relevant to both the sporting event and the city brand. In order to know whether this is true, or whether the match-up theory is disproved, further research needs to be conducted using different sporting events hosted in different cities.

### 7.2 Practical Implications

For city leaders and other stakeholders looking to increase the perceived *Pulse* scores for their cities, then sporting events can be used as an effective tool. However, this is not to say that by hosting a more exciting event, a city will immediately be perceived as more exciting. As our research shows, all sporting events have positive coefficients to the perceived *Pulse* score for Singapore, albeit some are more significant than the others. AVIVA, which has the lowest mean *Pulse* score, is statistically more significant than the other two sporting events in explaining the perceived *Pulse* scores for Singapore. Above all else this indicates that city leaders and other stakeholders need to determine which groups of people they hope to change the perceptions of before deciding on which events they want to host. By hosting events this group has an affinity to, no matter how exciting they are on average, the group will likely perceive the *Pulse* dimension of the city's brand more favorably.

Sporting events can also be used as an effective tool to increase the perceived *Place* scores for a city. In this case, we are saying that by hosting an event with a more pleasant atmosphere, a city will be perceived as a more pleasant place to travel or live. Our research shows that all sporting events, regardless of their mean *Place* scores, could explain some of the variance in the *Place* scores for Singapore, albeit some are more significant than others. Furthermore, all sporting events are statistically significant in explaining the physical attractiveness *Place* score for Singapore, and have positive estimated coefficients. By hosting events the targeted group sees as having the best atmosphere, the group will likely perceive the *Place* dimension of city's brand more favorably.

When city leaders and other stakeholders look to increase the perceived *Pulse* or *Place* for their cities, then the perceived match of the sporting event should also be considered. However, the first interpretation of the match-up theory mentioned earlier makes it difficult to determine which events actually match. For example, the mean short-term and long-term *Pulse* scores for Singapore were above 3, meaning that on average it is considered to be more exciting according to our scale. The same is also true for F1 and VOLVO events. However, when asked whether these events match the city, less than half of the respondents perceived them to be a good match. Alternatively, they should look more to the level of perceived match for certain events. If for example, a city is considering hosting a less exciting event, the level of perceived match could be a useful predictor in how it might affect the perceived long-term *Pulse* dimension of its brand. Furthermore, if a city is considering hosting any sporting event, the level of perceived match could also be a useful predictor in how it might affect the perceived physical attractiveness *Place* dimension of its brand.

## List of references

- Ang, L. & Dubelaar, C. (2006). *Explaining Celebrity Match-up: Co-activation Theory of Dominant Support*, School of Management, Monash University.
- Anholt, S. (2006). How the world sees the world's cities. *Place Branding and Public Diplomacy*, 2(1), 18-31.
- Ashworth, G. & Kavaratzis, M. (2009). Beyond the logo: Brand management for cities. *Journal of Brand Management*, 16(8), 520-31.
- Baker, M. J. & Churchill, G.A. (1977). The Impact of Physically Attractive Models on Advertising Evaluations. *Journal of Marketing Research*, 14(November), 538-55.
- Bourdieu, P. (1997). The forms of capital. In H. Halsey, H. Lauder, P. Brown & A.S. Wells (Eds.). *Education, Culture, Economy and Society* (46-58), Oxford: Oxford University Press.
- Euchner, C.C. (1999). Tourism and sports: the serious competition for play. In D.R. Judd & S.S. Fainstein (Eds.). *The Tourist City* (215-32), New Haven: Yale University Press.
- GfK America (2009). *Three U.S. Cities Among Top Ten*. Available from: [http://www.gfkamerica.com/newsroom/press\\_releases/single\\_sites/004195/index.en.html](http://www.gfkamerica.com/newsroom/press_releases/single_sites/004195/index.en.html) [Accessed: March 17, 2010].
- Gospodini, A. (2006). Portraying, classifying and understanding the emerging landscapes in the post-industrial city. *Cities* 23(5), 311- 30.
- Hankinson, G. (2004). Relational Network Brands: Towards a Conceptual Model of Place Brands. *Journal of Vacation Marketing*, 10(2), 109-21.
- Henderson, J. (2007). Uniquely Singapore? A case study in destination branding. *Journal of Vacation Marketing*, 13(3), 261-74.
- Joseph, B. (1982). The Credibility of Physically Attractive Communicators: A Review. *Journal of Advertising*, 11(3), 15-24.
- Kahle, L. P. and Homer, P.M. (1985). Physical Attractiveness of the Celebrity Endorser: A Social Adaptation Perspective. *Journal of Consumer Research*, 11(March), 954-61.
- Kaikati, J. (1987). Celebrity Advertising: A Review and Synthesis. *International Journal of Advertising*, 6, 93-105.
- Kamins, M. (1990). An Investigation into the 'Match-Up' Hypothesis in Celebrity Advertising: When Beauty Is Only Skin Deep. *Journal of Advertising*, 19(1), 4-13.
- Kavaratzis, M. (2004). From City Marketing to City Branding: Towards a Theoretical Framework for Developing City Brands. *Journal of Place Branding* 1(1), 58-73.



## List of references

- Kavaratzis, M. (2009). Cities and their brands: Lessons from corporate branding. *Place Branding and Public Diplomacy*, 5(1), 1-89.
- Keller, K.L. (2002). Branding and Brand Equity. In B. Weitz & R. Wensley (Ed.) *Handbook of Marketing* (151-78), London: Sage.
- Koernig, S. & Page, A. (2002). What if your Dentist Looked Like Tom Cruise? Applying the Match-Up Hypothesis to a Service Encounter. *Psychology and Marketing*, 19(1), 91-110.
- Lynch, J. & Schuler, D. (1994). The Matchup Effect of Spokesperson and Product Congruence: A Schema Theory Interpretation. *Psychology and Marketing*, 11(5), 417-45.
- McDaniel, S. (1999). An Investigation of Match-Up Effects in Sport Sponsorship Advertising: The Implication of Consumer Advertising Schema. *Psychology and Marketing*, 16(2), 163-84.
- Misra, S., & Beatty, S. (1990). Celebrity Spokesperson and Brand Congruence: An Assessment of Recall and Affect. *Journal of Business Research*, 21, 159-73.
- Motion Picture Association of America (2010). *Worldwide Box Office Continues To Soar*. Available from: [http://www.mpa.org/press\\_releases/worldwide%20box%20office%20continues%20to%20soar;%20u.s.pdf](http://www.mpa.org/press_releases/worldwide%20box%20office%20continues%20to%20soar;%20u.s.pdf) [Accessed: April 5, 2010].
- Rainisto, S.K. (2003). *Success Factors of Place Marketing: A Study of Place Marketing Practices in Northern Europe and the United States*, Institute of Strategy and International Business, Helsinki University of Technology.
- Rein, I., & Shields, B. (2007). Place branding sports: Strategies for differentiating emerging, transitional, negatively viewed and newly industrialized nations. *Place Branding and Public Diplomacy*, 3, 73-85.
- Singapore Sports Council (2007/2008). *Annual Report*. Available from: [http://www.ssc.gov.sg/publish/etc/medialib/sports\\_web\\_uploads/gc/annual\\_report.Par.0002.File.tmp/SSC%20Annual%20Report%2007/08.pdf](http://www.ssc.gov.sg/publish/etc/medialib/sports_web_uploads/gc/annual_report.Par.0002.File.tmp/SSC%20Annual%20Report%2007/08.pdf) [Accessed: February 25, 2010].
- Singapore Sports Council (2008/2009). *Annual Report*. Available from: [http://www.ssc.gov.sg/publish/etc/medialib/sports\\_web\\_uploads/gc/annual\\_report.Par.0003.File.tmp/SSC%20AR%200809.pdf](http://www.ssc.gov.sg/publish/etc/medialib/sports_web_uploads/gc/annual_report.Par.0003.File.tmp/SSC%20AR%200809.pdf) [Accessed: March 14, 2010].
- Singapore Sports Council (2008) *Sports Excellence*. Available from: <http://www.ssc.gov.sg/publish/Corporate/en/excellence/excellence.html>. [Accessed: February 25, 2010].
- Singapore Sports Council (2006). *Sports Vision 2010 on Track*. Available from: [http://www.ssc.gov.sg/publish/Corporate/en/news/media\\_releases/2006\\_media\\_releases/Singapores\\_Sports\\_Vision\\_2010\\_on\\_Track.html](http://www.ssc.gov.sg/publish/Corporate/en/news/media_releases/2006_media_releases/Singapores_Sports_Vision_2010_on_Track.html). [Accessed: March 14, 2010].

## List of references

- Smith, A. (2005). Reimagining the city: The value of Sport Initiative. *Annals of Tourism Research*, 32(1), 217-36.
- Stafford, M. R., Stafford, T.F., and Day, E. (2002). A Contingency Approach: The Effects of Spokesperson Type and Service Type on Service Advertising Perceptions. *Journal of Advertising*, 31(2), 17-35.
- Trueman, M and Cornelius, N. (2006). Hanging Baskets or Basket Cases? Managing the Complexity of City Brands and Regeneration. *Bradford University Working Paper Series*, Work6(13), 1-21.
- World Bank (2007). *Doing Business 2007*. Available from: <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/EASTASIAPACIFICEXT/0,contentMDK:21058002~pagePK:146736~piPK:146830~theSitePK:226301,00.html> [Accessed: March 26, 2010].
- World Economic Forum (2009). *Financial Development Report 2009*. Available from: <http://www.weforum.org/en/initiatives/gcp/FinancialDevelopmentReport/index.htm> [Accessed: March 26, 2010].
- Xing, X., & Chalip, L. (2006). Effects of Hosting a Sport Event on Destination Brand: A Test of Co-branding and Match-up Models. *Sport Management Review*, 9(1), 49-78.
- Yuen, B. (2006). Sport and urban development in Singapore. *Cities*, 25(1), 29-36.
- Zhang, L., & Zhao, X. (2009). City branding and the Olympic effect: A case study of Beijing. *Cities*, 26(1), 245-54.

## Appendices

### Appendix 1 – Questionnaire

#### City Branding and Sporting Events

We are students from Jönköping International Business School currently conducting research on City Branding for our master thesis. The purpose of this survey is to gather people’s perception towards Singapore. This survey consists of 14 questions and will take 2 to 4 minutes to complete. Thank you for your participation.

AVIVA Open Singapore - World Badminton Federation (WBF) Super Series event featuring the world’s best international shuttlers.
The Singapore Grand Prix - The world’s only inner city Formula One night race featuring world-class drivers.
The Volvo Ocean Race - The world ‘s longest and most perilous sailing contest featuring world-class seafarers.

Nationality \_\_\_\_\_

Gender  Male  Female

Age \_\_\_\_\_

1. Have you ever visited Singapore? Yes No
2. How exciting do you think “AVIVA Open Singapore’ would be for you as a spectator?  
 1 2 3 4 5  
 Not at all exciting      Very exciting
3. How exciting do you think “The Singapore Grand Prix’ would be for you as a spectator?  
 1 2 3 4 5  
 Not at all exciting      Very exciting
4. How exciting do you think “The Volvo Ocean Race’ would be for you as a spectator?  
 1 2 3 4 5  
 Not at all exciting      Very exciting
5. How pleasant do you think the physical surroundings of “AVIVA Open Singapore’ would be for you as a spectator?  
 1 2 3 4 5  
 Not at all pleasant      Very pleasant

## Appendices

6. How pleasant do you think the physical surroundings of ‘The Singapore Grand Prix’ would be for you as a spectator?

1 2 3 4 5

Not at all pleasant      Very pleasant

7. How pleasant do you think the physical surroundings of ‘The Volvo Ocean Race’ would be for you as a spectator?

1 2 3 4 5

Not at all pleasant      Very pleasant

8. Please rate Singapore in terms of how exciting you think it is for short-term visitors?

1 2 3 4 5

Not at all exciting      Very exciting

9. Please rate Singapore in terms of how exciting you think it is for long-term visitors?

1 2 3 4 5

Not at all exciting      Very exciting

10. Please rate Singapore in terms of how pleasant you think it is to travel around the city.

1 2 3 4 5

Not at all pleasant      Very pleasant

11. Please rate Singapore in terms of how physically attractive you think it is.

1 2 3 4 5

Not at all attractive      Very attractive

12. Based on your perceptions of Singapore and ‘AVIVA Open Singapore’, how well do you think the two match each other?

1 2 3 4 5

Very poor match      Very good match

13. Based on your perceptions of Singapore and ‘The Singapore Grand Prix’, how well do you think the two match each other?

1 2 3 4 5

Very poor match      Very good match

14. Based on your perceptions of Singapore and ‘The Volvo Ocean Race’, how well do you think the two match each other?

1 2 3 4 5

Very poor match      Very good match

## Appendices

### Appendix 2 – List of Sporting Events 2008-2009

Sporting events	Descriptions
AVIVA Open Singapore (AVIVA)	Organized by the Singapore Badminton Association with partner Singapore Sports Council and sanctioned by the Badminton World Federation, more than 250 top international shuttlers from about 28 countries take part in the badminton tournament. (Aviva Open Singapore homepage)
Singapore Grand Prix (F1)	The world's first Formula One night race (SSC annual report 2008/2009), the highest class of auto racing sanctioned by Federation Internationale de l'Automobile (Wikipedia)
Asian Youth Games	The first Asian Youth Games with about 1000 athletes from 44 countries (Singapore Youth Olympic Games 2010 website)
Volvo Ocean Race (VOLVO)	The world's longest and most perilous sailing contest (SSC annual report and Volvo Ocean Race website)
OSIM Singapore Triathlon	Homegrown event with 3500 triathletes participated across all age (SSC annual report)
AVIVA Ironman 70.3 Singapore	Asia's largest Ironman 70.3 with 1400 participants, which included 800 overseas Ironman competitors (SSC annual report)
Standard Chartered Singapore Marathon	Record-breaking 50000 participants from around the world a prize purse of SGD270000, marked the first year that ESPN signs on as the Official Broadcast partner (SSC annual report)
OCBC Cycle Singapore	Singapore's first mass participation cycling event with 5300 participants to promote safe cycling in Singapore and sporting nation (OCBC Cycle Singapore homepage)
HSBC Women's Champions	The world's best professional women golfers tournament (HSBC golf website)

## Appendices

### Appendix 3 – Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Age	200	17	39	22.07	2.975
GenDum	200	.00	1.00	.5450	.49922
VisitDum	200	.00	1.00	.3100	.46365
CounDum	200	.00	1.00	.6250	.48534
Perceived <i>Pulse</i> score for AVIVA	200	1	5	2.64	1.212
Perceived <i>Pulse</i> score for F1	200	1	5	3.41	1.261
Perceived <i>Pulse</i> score for VOLVO	200	1	5	3.09	1.198
Perceived <i>Place</i> score for AVIVA	200	1	5	3.02	.974
Perceived <i>Place</i> score for F1	200	1	5	3.48	1.089
Perceived <i>Place</i> score for VOLVO	200	1	5	3.51	1.042
Perceived short-term <i>Pulse</i> score for Singapore	200	1	5	3.95	.955
Perceived long-term <i>Pulse</i> score for Singapore	200	1	5	3.01	1.070
Perceived pleasant travel <i>Place</i> score for Singapore	200	1	5	3.75	.946
Perceived physical attractiveness <i>Place</i> score for Singapore	200	1	5	3.58	.984
Perceived match between AVIVA and Singapore	200	1	5	3.10	.860
Perceived match between F1 and Singapore	200	1	5	3.39	1.040

*92 respondents were male and 108 respondents were female, and 34 different nationalities were represented.*

Appendices

**Appendix 4 – Pearson Bivariate Correlations (N=200, \*0.05 level, \*\*0.01 level)**

		Age	GenDum	VisitDum	CounDum	Perceived Pulse score for AVIVA	Perceived Pulse score for F1	Perceived Pulse score for VOLVO	Perceived Place score for AVIVA	Perceived Place score for F1	Perceived Place score for VOLVO	Perceived match between AVIVA and Singapore	Perceived match between F1 and Singapore	Perceived match between VOLVO and Singapore
Age	Pearson Correlation	1	-.161*	.053	-.427**	-.206**	.129	-.010	-.120	.104	.050	-.012	.267**	.073
	Sig. (2-tailed)		.023	.453	.000	.003	.069	.887	.091	.141	.482	.861	.000	.303
GenDum	Pearson Correlation	-.161*	1	.178*	.205**	-.018	-.253**	-.002	.035	-.183**	-.073	-.109	-.222**	-.009
	Sig. (2-tailed)	.023		.012	.004	.796	.000	.975	.625	.010	.302	.123	.002	.896
VisitDum	Pearson Correlation	.053	.178*	1	.251**	-.164*	-.021	-.138	-.044	.025	-.121	-.049	-.072	-.076
	Sig. (2-tailed)	.453	.012		.000	.020	.770	.051	.539	.721	.088	.491	.314	.283
CounDum	Pearson Correlation	-.427**	.205**	.251**	1	.245**	-.060	.038	.224**	.006	-.067	.146*	-.121	-.070
	Sig. (2-tailed)	.000	.004	.000		.000	.402	.595	.001	.933	.345	.039	.089	.325
Perceived Pulse score for AVIVA	Pearson Correlation	-.206**	-.018	-.164*	.245**	1	.286**	.433**	.605**	.197**	.303**	.400**	.216**	.201**
	Sig. (2-tailed)	.003	.796	.020	.000		.000	.000	.000	.005	.000	.000	.002	.004
Perceived Pulse score for F1	Pearson Correlation	.129	-.253**	-.021	-.060	.286**	1	.393**	.265**	.626**	.368**	.242**	.557**	.181*
	Sig. (2-tailed)	.069	.000	.770	.402	.000		.000	.000	.000	.000	.001	.000	.010
Perceived Pulse score for VOLVO	Pearson Correlation	-.010	-.002	-.138	.038	.433**	.393**	1	.408**	.293**	.605**	.246**	.212**	.419**
	Sig. (2-tailed)	.887	.975	.051	.595	.000	.000		.000	.000	.000	.000	.003	.000
Perceived Place score for AVIVA	Pearson Correlation	-.120	.035	-.044	.224**	.605**	.265**	.408**	1	.377**	.428**	.346**	.123	.208**
	Sig. (2-tailed)	.091	.625	.539	.001	.000	.000	.000		.000	.000	.000	.082	.003
Perceived Place score for F1	Pearson Correlation	.104	-.183**	.025	.006	.197**	.626**	.293**	.377**	1	.437**	.236**	.521**	.126
	Sig. (2-tailed)	.141	.010	.721	.933	.005	.000	.000	.000		.000	.001	.000	.076
Perceived Place score for VOLVO	Pearson Correlation	.050	-.073	-.121	-.067	.303**	.368**	.605**	.428**	.437**	1	.181*	.272**	.425**
	Sig. (2-tailed)	.482	.302	.088	.345	.000	.000	.000	.000	.000		.010	.000	.000
Perceived match between AVIVA and Singapore	Pearson Correlation	-.012	-.109	-.049	.146*	.400**	.242**	.246**	.346**	.236**	.181*	1	.464**	.291**
	Sig. (2-tailed)	.861	.123	.491	.039	.000	.001	.000	.000	.001	.010		.000	.000
Perceived match between F1 and Singapore	Pearson Correlation	.267**	-.222**	-.072	-.121	.216**	.557**	.212**	.123	.521**	.272**	.464**	1	.407**
	Sig. (2-tailed)	.000	.002	.314	.089	.002	.000	.003	.082	.000	.000	.000		.000
Perceived match between VOLVO and Singapore	Pearson Correlation	.073	-.009	-.076	-.070	.201**	.181*	.419**	.208**	.126	.425**	.291**	.407**	1
	Sig. (2-tailed)	.303	.896	.283	.325	.004	.010	.000	.003	.076	.000	.000	.000	

### Appendix 5 – List of Linear Regression Models<sup>3</sup>

**1. Perceived short-term Pulse score for Singapore** =  $\beta_0 + \beta_1 \text{ Age} + \beta_2 \text{ CounDum} + \beta_3 \text{ GenDum} + \beta_4 \text{ VisitDum} + \beta_5 \text{ Perceived Pulse score for AVIVA} + \beta_6 \text{ Perceived Match between AVIVA and Singapore} + \varepsilon$

**2. Perceived short-term Pulse score for Singapore** =  $\beta_0 + \beta_1 \text{ Age} + \beta_2 \text{ CounDum} + \beta_3 \text{ GenDum} + \beta_4 \text{ VisitDum} + \beta_5 \text{ Perceived Pulse score for F1} + \beta_6 \text{ Perceived Match between F1 and Singapore} + \varepsilon$

**3. Perceived short-term Pulse score for Singapore** =  $\beta_0 + \beta_1 \text{ Age} + \beta_2 \text{ CounDum} + \beta_3 \text{ GenDum} + \beta_4 \text{ VisitDum} + \beta_5 \text{ Perceived Pulse score for VOLVO} + \beta_6 \text{ Perceived Match between VOLVO and Singapore} + \varepsilon$

**4. Perceived long-term Pulse score for Singapore** =  $\beta_0 + \beta_1 \text{ Age} + \beta_2 \text{ CounDum} + \beta_3 \text{ GenDum} + \beta_4 \text{ VisitDum} + \beta_5 \text{ Perceived Pulse score for AVIVA} + \beta_6 \text{ Perceived Match between AVIVA and Singapore} + \varepsilon$

**5. Perceived long-term Pulse score for Singapore** =  $\beta_0 + \beta_1 \text{ Age} + \beta_2 \text{ CounDum} + \beta_3 \text{ GenDum} + \beta_4 \text{ VisitDum} + \beta_5 \text{ Perceived Pulse score for F1} + \beta_6 \text{ Perceived Match between F1 and Singapore} + \varepsilon$

**6. Perceived long-term Pulse score for Singapore** =  $\beta_0 + \beta_1 \text{ Age} + \beta_2 \text{ CounDum} + \beta_3 \text{ GenDum} + \beta_4 \text{ VisitDum} + \beta_5 \text{ Perceived Pulse score for VOLVO} + \beta_6 \text{ Perceived Match between VOLVO and Singapore} + \varepsilon$

**7. Perceived pleasant travel Place score for Singapore** =  $\beta_0 + \beta_1 \text{ Age} + \beta_2 \text{ CounDum} + \beta_3 \text{ GenDum} + \beta_4 \text{ VisitDum} + \beta_5 \text{ Perceived Place score for AVIVA} + \beta_6 \text{ Perceived Match between AVIVA and Singapore} + \varepsilon$

**8. Perceived pleasant travel Place score for Singapore** =  $\beta_0 + \beta_1 \text{ Age} + \beta_2 \text{ CounDum} + \beta_3 \text{ GenDum} + \beta_4 \text{ VisitDum} + \beta_5 \text{ Perceived Place score for F1} + \beta_6 \text{ Perceived Match between F1 and Singapore} + \varepsilon$

**9. Perceived pleasant travel Place score for Singapore** =  $\beta_0 + \beta_1 \text{ Age} + \beta_2 \text{ CounDum} + \beta_3 \text{ GenDum} + \beta_4 \text{ VisitDum} + \beta_5 \text{ Perceived Place score for VOLVO} + \beta_6 \text{ Perceived Match between VOLVO and Singapore} + \varepsilon$

**10. Perceived physical attractiveness Place score for Singapore** =  $\beta_0 + \beta_1 \text{ Age} + \beta_2 \text{ CounDum} + \beta_3 \text{ GenDum} + \beta_4 \text{ VisitDum} + \beta_5 \text{ Perceived Place score for AVIVA} + \beta_6 \text{ Perceived Match between AVIVA and Singapore} + \varepsilon$

**11. Perceived physical attractiveness Place score for Singapore** =  $\beta_0 + \beta_1 \text{ Age} + \beta_2 \text{ CounDum} + \beta_3 \text{ GenDum} + \beta_4 \text{ VisitDum} + \beta_5 \text{ Perceived Place score for F1} + \beta_6 \text{ Perceived Match between F1 and Singapore} + \varepsilon$

**12. Perceived physical attractiveness Place score for Singapore** =  $\beta_0 + \beta_1 \text{ Age} + \beta_2 \text{ CounDum} + \beta_3 \text{ GenDum} + \beta_4 \text{ VisitDum} + \beta_5 \text{ Perceived Place score for VOLVO} + \beta_6 \text{ Perceived Match between VOLVO and Singapore} + \varepsilon$

---

<sup>3</sup> A similar list of regression models was also tested, only perceived match was coded as a dummy variable.



Appendices

**Appendix 6 - Output Summary of Models with Perceived Match Coded as a Dummy Variable**

Perceived short-term <i>Pulse</i> score for Singapore						
	Model 1 (AVIVA)		Model 2 (F1)		Model 3 (VOLVO)	
	Unstandardized Coefficient	t-statistic	Unstandardized Coefficient	t-statistic	Unstandardized Coefficient	t-statistic
Constant	2.479	3.893***	2.742	4.287***	2.520	4.113***
Age	0.053	2.092**	0.040	1.543	0.042	1.728*
Country	-0.300	-1.852*	-0.186	-1.177	-0.219	-1.409
Gender	0.159	1.172	0.220	1.553	0.131	0.977
Visited	-0.174	-1.138	-0.272	-1.796*	0.185	-1.240
<i>Pulse</i> AVIVA	0.171	2.823***				
<i>Pulse</i> F1			0.111	1.78*		
<i>Pulse</i> VOLVO					0.180	3.088***
Perceived match AVIVA & SG	0.049	0.307				
Perceived match F1 & SG			0.076	0.473		
Perceived match VOLVO & SG					0.141	1.015
Adjusted R-square	0.075		0.056		0.097	
F-ratio	3.707***		2.983***		4.579***	
Perceived long-term <i>Pulse</i> score for Singapore						
	Model 4 (AVIVA)		Model 5 (F1)		Model 6 (VOLVO)	
	Unstandardized Coefficient	t-statistic	Unstandardized Coefficient	t-statistic	Unstandardized Coefficient	t-statistic
Constant	1.897	2.868***	2.182	3.12***	2.053	3.088***
Age	0.039	1.503	0.037	1.320	0.032	1.202
Country	-0.504	-2.994***	-0.268	-1.548	-0.309	-1.834*
Gender	-0.160	-1.133	-0.160	-1.034	-0.224	-1.544
Visited	-0.297	-1.872*	-0.465	-2.813***	-0.355	-2.19**
<i>Pulse</i> AVIVA	0.242	3.835***				
<i>Pulse</i> F1			0.134	1.967*		
<i>Pulse</i> VOLVO					0.187	2.955***
Perceived match AVIVA & SG	0.402	2.414**				
Perceived match F1 & SG			-0.104	-0.591		
Perceived match VOLVO & SG					0.227	1.506
Adjusted R-square	0.206		0.102		0.154	
F-ratio	9.627***		4.774***		7.047***	

\*\*\* 1%, \*\* 5%, \* 10% significance levels

**Appendix 6 - Output Summary of Models with Perceived Match Coded as a Dummy Variable Cont'd**

Perceived pleasant travel <i>Place</i> score for Singapore			
	Model 7 (AVIVA)	Model 8 (F1)	Model 9 (VOLVO)

## Appendices

	Unstandardized Coefficient	t-statistic	Unstandardized Coefficient	t-statistic	Unstandardized Coefficient	t-statistic
Constant	1.996	3.187***	2.337	3.678***	1.600	2.653***
Age	0.037	1.495	0.024	0.951	0.032	1.361
Country	-0.108	-0.684	0.025	0.161	0.072	0.488
Gender	0.239	1.794*	0.341	2.459**	0.260	2.038**
Visited	-0.078	-0.529	-0.149	-0.996	-0.051	-0.361
Place AVIVA	0.286	4.032***				
Place F1			0.182	2.661***		
Place VOLVO					0.348	5.366***
Perceived match AVIVA & SG	0.166	1.067				
Perceived match F1 & SG			0.188	1.210		
Perceived match VOLVO & SG					0.112	0.825
Adjusted R-square	0.097		0.064		0.164	
F-ratio	4.547***		3.25***		7.504***	
<b>Perceived physical attractiveness <i>Place</i> score for Singapore</b>						
	<b>Model 10 (AVIVA)</b>		<b>Model 11 (F1)</b>		<b>Model 12 (VOLVO)</b>	
	Unstandardized Coefficient	t-statistic	Unstandardized Coefficient	t-statistic	Unstandardized Coefficient	t-statistic
Constant	1.672	2.548**	2.132	3.231***	1.691	2.605***
Age	0.055	2.138**	0.039	1.482	0.048	1.917*
Country	-0.171	-1.032	-0.054	-0.333	-0.020	-0.127
Gender	0.049	0.351	0.157	1.092	0.064	0.466
Visited	-0.161	-1.045	-0.213	-1.374	-0.147	-0.967
Place AVIVA	0.264	3.556***				
Place F1			0.133	1.868*		
Place VOLVO					0.201	2.874***
Perceived match AVIVA & SG	0.111	0.682				
Perceived match F1 & SG			0.292	1.811*		
Perceived match VOLVO & SG					0.312	2.146**
Adjusted R-square	0.085		0.068		0.107	
F-ratio	4.066***		3.43***		4.963***	

\*\*\* 1%, \*\* 5%, \* 10% significance levels