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If You Don't Need to Know, Don't Ask! Does Questionnaire Length Dilute the Stability of Brand Images?

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Abstract

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If you don't need to know, don't ask!

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dilute the stability of brand images?

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If you don't need to know, don't ask!

Does questionnaire length dilute the stability of brand images?

Brand image measurement is the most fundamental building block of strategic marketing decisions in branded industry. Therefore, brand image studies are both regularly conducted and well researched. Nevertheless the measurement tools used are typically not constructed with the scientific rigour needed to generate the most informative results. The aim of this article is to evaluate the effect of one potential weakness: questionnaire length. It is investigated whether questionnaire length influences (1) the initial response rate of assigning attributes to brands, (2) the repeat rate of doing so, and (3) the empirical generalisation proposed by Dall'Olmo Riley et al. (1997) according to which there is a constant relationship between repeat rates and the initial response level.

1 Introduction

Branded industry grounds strategic marketing decisions on market knowledge regarding brand image. Brand image measurement is therefore one of the most crucial tools for successful strategic marketing in branded industry. Despite the fact that companies regularly conduct such surveys and many researchers have studied various aspects of measuring brand attributes, perceptions, and images, a number of questions remain unanswered. One of those questions, the one investigated in this study, is based on (1) the observation that both brands and attributes included in brand image surveys are frequently not derived from extensive explorative studies but chosen based on managerial evaluation of importance, and (2) the repeated empirical finding that brand images are not stable when respondents are surveyed multiple times (Dall'Olmo Riley *et al.* 1997; Sharp & Romaniuk 2002a, 2002b): Does the length of the questionnaire dilute brand image stability findings?

2 Brand image measurement: prior research

Brand image can be defined as “perceptions about a brand as reflected by the brand associations in consumer memory” (Keller 1993, p. 3). Low & Lamb (2000) see brand image as one of three dimensions of brand associations. The connection between brand associations and their measurement and brand image (attribute) measurement could be even stronger, as some researchers use the terms “image” and “perceptions” synonymously (Boivin 1986, Romaniuk & Sharp 2003). A brand attribute is one specific quality or characteristic of a brand. The definition of brand attributes is essential in brand image surveys, because brands are usually evaluated along certain dimensions or characteristics and rarely in a holistic manner. It is also reasonable to assume, that, although consumers do have a complete image of a product in their mind, this image consists of different components, attributes, towards which consumers form attitudes (Myers & Alpert 1968). Therefore brand image measurement requires the selection of a set of brand attributes which can be defined by the researcher or – which seems to us the far better method - elicited from consumers (Boivin 1986). This can be done through direct questioning, indirect questioning or observation and experimentation (Myers & Alpert 1968; Alpert 1971).

The selection of brand attributes is probably the most crucial decision from the perspective of a marketing manager concerned with brand image. Including attributes that are not relevant in the consumers' perception, for example because they are standard or common to the product category of interest, provides no managerial insight of any importance to strategic planning. Also, including a reasonable number of attributes is crucial in brand image measurement as each

additional attribute leads to as many additional questions for the respondent as there are brands and fatigue can deteriorate data quality.

Barwise & Ehrenberg (1985) introduced the division of attributes into descriptive and evaluative ones. Descriptive attributes are defined as physical or promotional factors that are able to differentiate a brand from its competitors, and can be identified as such that response levels on these attributes in image surveys are not related to how many users a brand has (Dall’Olmo Riley *et al.* 1997). The mentioning of evaluative attributes in image surveys occurs irrespective of the specific nature of the brand. Those are quoted by brand users rather than by non-users in surveys. For image research one might rather rely on descriptive attributes, excluding purely functional ones which are not likely to have any influence on brand image. Somehow contrary, Howard (1977) divides brand verbalizations into nominal, descriptive and evaluative, stressing the importance of evaluative verbalizations as they identify and evaluate a brand. He also notes that evaluative attributes can be either general or specific. Important to keep in mind is that brand image consists of consumer-perceived attributes (see definition at the beginning of this section) as opposed to “objective” attributes (Stokmans 1991, cited by Puth, Mostert & Ewing 1999). Low & Lamb (2000) conceptualise brand image as functional and symbolic (reasoned vs. emotional) brand beliefs, where symbolic beliefs might better reflect the image component. They stress that brand image associations are in most cases product category specific and scales should be customized for the unique characteristics of the category of interest. This includes the careful choice of the right attributes. Romaniuk & Sharp (2003) found that brand perceptions consist of descriptive information, benefits, evaluation of specific aspects and the purchase/consumption situation. They identify different types of attributes potentially triggering purchase – thus important. A particularly detailed analysis of attributes in scale development is given by Rossiter (2002) who distinguishes between concrete (unanimous agreement on the meaning of the attribute) and abstract attributes. Formed attributes are attributes made up of multiple components (other attributes) and eliciting attributes are internal traits or states that have only indicative outward manifestations.

Regarding the number of attributes it is widely known that including too many attributes in a brand image survey might have negative effects on data quality as respondents experience fatigue. Johnson, Lehmann & Horne (1990) who investigated the effects of fatigue in multidimensional scaling procedures state that “there is a limit to the amount of quality information that can be collected from respondents” (p. 35). Wilkie & Weinreich (1972) conclude that “attitudes can be efficiently described with fewer attributes than are typically gathered in marketing research” and that “the incorporation of only salient attributes leads to significantly better results” (p. 338).

In the present study we follow the recommendations by Boivin (1986) and determine the brand attributes through market research. Consistent with Wilkie & Weinreich (1972) we carefully select the attributes to be included in the survey. As a selection criteria we use importance, a broader concept than salience or determinance (see Myers & Alpert 1977 for terminology), which is measured both in a pre-study and in the final survey tool as disaggregate control factor of the results.

3 The empirical study

The fieldwork for the study was conducted in 2003 at the University of Wollongong in Australia and consisted of a multi-stage exploratory phase (qualitative and quantitative) as well as a longitudinal quantitative phase. The exploratory phase was required in order to determine the components of the survey:

First, one high involvement and one low involvement product category for the sample under study (university students) was determined by conducting a focus group interview and

subsequently presenting a short questionnaire to students on campus that measured the involvement with the product categories that had emerged in the focus group discussions. As a result of this procedure, sports shoes were chosen as a high-involvement and laundry detergents as a low-involvement product category.

Next, brands had to be selected for inclusion in the survey. Two focus group discussions were conducted with the aim to reveal both strong and distinct and weakly profiled brands within each one of the two product categories. In addition, a little survey was conducted in a postgraduate class with 50 students who were asked to list as many brands as possible in the two product categories. Ten brands from each product category were selected.

The third stage of the exploratory work aimed at determining relevant attributes for use in the longitudinal survey for both product categories. For this purpose, the direct questioning approach as recommended by Alpert (1971) was used: a short questionnaire was designed, asking students to list attributes that can be used to describe the product category and one particular brand. Each respondent was only confronted with one product category and one brand, the questionnaires were rotated systematically to include equally many questionnaires for each product category as well as all brand names selected. The attributes were then categorized independently by three researchers and the most frequently mentioned non-redundant attributes were chosen. Furthermore, four control attributes were developed that were not mentioned by the respondents in the exploratory phase but were judged as not important by the researchers.

Finally, the questionnaire for the longitudinal study was developed. The questionnaire design accounted for a number of phenomena known to be relevant in the context of brand image measurement:

- measurement of respondent fatigue was made possible by producing long questionnaires (including 10 brands and 12 attributes for both product categories) and short questionnaires (five brands, six attributes and only one product category),
- order effects were taken into consideration by fully rotating the brand names and attributes,
- the direction of the brand image question (assigning attributes to brands or brands to attributes) was controlled for by producing half of the questionnaires in one, the other half in the other format,
- the importance of the attributes, and
- the personal involvement with the product categories.

The survey was conducted in three consecutive weeks through lectures and tutorials held at Faculty of Commerce at the University of Wollongong. The Students' ID was collected and used to match the questionnaires from different survey waves and was deleted immediately after data entry. Only respondent's answers that were available for all three measurements were included in the final data set.

3.1 Data set and methodology

357 valid cases are included in the data set. 204 were exposed to the long questionnaire including both the laundry detergent category and the sports shoe brands, 61 answered only image questions regarding detergents and 92 were questioned on sports shoes exclusively. 52 percent of the respondents were male, 48 percent female. The majority was from Australia or New Zealand (59 percent), followed by 28 percent from Asia, 8 percent from Europe, 5 percent from the Americas, and 0.5 percent from Africa. The average age of the respondents amounted to 21 years. The selection of product categories was validated, as the average answer to the question "I carefully choose my sports shoes" was 14 out of a maximum of 20 thus indicating high student involvement, whereas laundry detergents scored only an average value of 6 on the same question. On average, the students contained in the sample bought 2 pairs of shoes per year and 11 bottles of detergent.

The computations undertaken by Dall’Olmo Riley et al. (1997) were replicated separately for the long, fatiguing questionnaire and the short questionnaire. Furthermore, response levels, repeat rates and distributions of repeat rates were tested using Chi-square tests (both Bonferroni corrected and non-corrected).

3.2 Results

3.2.1 Association of questionnaire length and response level

No respondent fatigue effects with regard to the initial response level (RL, defined as the percentage of respondents who associate each attribute to each brand when asked the first time) can be detected. The average response level for the short questionnaire (averaged over both product categories, all brands and all attributes) was 28 percent, as opposed to 26 percent in the long version of the questionnaire. Investigating the issue on the basis of Chi-square tests performed for each attribute-brand-combination separately leads to the same result: 40 direct attribute-brand comparisons could be tested in the detergent data set (Chi square tests, 1 percent significance level) resulting in ten significant differences without and three significant differences with Bonferroni correction. The sports shoe data allowed for 30 direct comparisons to be tested, of which two were significant when multiple testing was not accounted for and none when Bonferroni correction was performed. It can thus be concluded that with regard to the initial response level, the length of the questionnaire is not a critical parameter.

3.2.2 Association of questionnaire length and repeat rate

Analysis of the student data set supports the range for repeat rates stated by Dall’Olmo Riley et al. when the repeat rates are averaged over both categories, all brands and all attributes. Repeat rate (RR) is defined as the percentage of respondents who associate a certain brand with a certain attribute in the first survey round and do so again in the second and third survey wave. (It should be noted at this point, however, that our measure of the repeat rate is significantly stricter than the one used by Dall’Olmo Riley et al. as it states the percentage of respondents who associated each attribute-brand combination three times in a row as compared to only twice in the original study.)

Investigation of repeat rates for different conditions, however, indicates that there are substantial differences in the stability of the expressed attitudes by respondents. Table 1 gives the repeat rates averaged over everything and separate repeat rates for different questionnaire lengths (still averaging over brands and attributes).

Table 1: Repeat rates

	<i>total</i>	<i>short questionnaire</i>	<i>long questionnaire</i>
<i>repeat rate</i>	43%	59%	38%
<i>repeat rate laundry</i>	37%	55%	32%
<i>repeat rate sports shoes</i>	49%	65%	45%

As can be seen from the table, the average repeat rates for the short questionnaire for the high involvement product category of sports shoes amounts to 65 percent. This means that two thirds of the sample (not only frequent sports shoe buyers or loyal customers of one particular brand) assign the same attributes to the same brands in three consecutive surveys. The repeat rates for the long questionnaire are lower under all conditions. Of course, the attitudinal stability can possibly be further increased when the number of influencing sources is eliminated (when less averaging is undertaken). For instance, the average repeat rate (over all attributes) for Nike amounts to a strong 80 percent over three consecutive measurements. Even in the low involvement category, Omo achieves 69 percent.

Furthermore the distribution of associations (never, once, twice, three times) was tested contrasting the short and the long questionnaire version on a brand-attribute level, leading to the

conclusion that the majority of associations differed significantly. The length of the questionnaire thus seems to play an important role in the repeat rate levels of brand-attribute associations.

3.2.3 The association of questionnaire length and the constant of 20

Finally, the empirical generalisation of the form $RR=RL+X$, where X is postulated to be 20 Dall'Olmo Riley et al. (1997) is investigated accounting for heterogeneity in survey conditions. Similarly to the findings regarding response rates, it seems that averaging is the main reason for the fact that the constant of 20 empirically generalises. In the long questionnaire version X resulted in a value of 10, in the short version the constant was 30. Similar variations were found when extracting single brands or single attributes. It can thus be concluded that the constant of 20 is a result of averaging rather than an empirically generalisable finding over various conditions.

4 Conclusions, limitations and future work

The effect of questionnaire length, and thus implicitly respondent fatigue in the context of brand image measurement was investigated. Based on the data set used, that was collected following extensive qualitative and quantitative selection processes of product categories, brands and attributes, it can be concluded that (1) the length of the questionnaire is in no way associated with the initial response levels, (2) longer questionnaires decrease the repeat rates, and (3) the constant in the empirical generalisation suggested by Dall'Olmo Riley et al. (1997) varies dramatically under different survey conditions.

All of these findings have practical implications on questionnaire design for brand image measurement purposes: If only one measurement is required, the length of the questionnaire is not critical. But it is not so much a cross-sectional snapshot, but more the stability and consistency of brand images over time that should be of interest to the marketer who wants to use image data for building marketing action and enhancing brand perceptions and value. It is therefore advisable to conduct research studying image stability as well. If then brand image stability, and thus repeat rates, are the relevant constructs under investigation, the length of the questionnaire significantly reduces influences the values. In this case special care has to be given to the exploratory pre-stages in order to select and include only a small number of highly relevant brands and attributes, to avoid dilution of results through respondent fatigue. Generally, repeat rates can be quite high, even if the repetition is measured over three periods of time, thus justifying and reinstating the value of brand image studies.

The limitations of this study include the small sample size, the sub-segment of the market investigated (university students only), and the limitation of the investigation to two product categories. A replication of this study with a representative sample of the population and a wider variety of product categories would be an interesting project for future work.

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