Title: METHOD FOR COLLECTING AND ANALYSING MARKETING DATA

Abstract: Disclosed is a method for collecting market research related consumer data and analysing said data to enhance understanding of consumer behaviour when said consumers are making decisions to purchase competing products within a specific product category to meet the consumers needs at a particular shopping occasion, said method including the steps of: posing to a consumer a series of questions designed to elicit a series of preferential choices between all competing products in a given category as presented to said consumer, on the basis of the needs of the consumer at that particular shopping occasion; repeating the preceding step until a statistically significant number of consumers has been questioned and their answers recorded as input data to an analysis step; performing an analysis step by analysing the data so obtained in a manner which results in the grouping of consumers, by reference to their responses, into groups distinguished by distinct patterns of choice, thereby enabling identification and understanding of the motivators of the choice behaviour of different types of consumers', when seeking to meet a particular need on a particular shopping occasion.
METHOD FOR COLLECTING AND ANALYSING MARKETING DATA

FIELD OF THE INVENTION

The invention relates to the field of market research, as used to support and inform consumer goods category management. In particular it relates to an advantageous method for collecting data from market participants and analysing and presenting said data in a more useful way.

BACKGROUND TO THE INVENTION

In the market for fast moving consumer goods (FMCG) (including, but not limited to, food products and what are referred to as 'groceries'), retailers and manufacturers of such goods work together to ensure that the range of products on presented on the supermarket shelf meet shopper needs effectively, in order to maximise sales.

As well as optimising range, key concerns for the marketer and retailer include how to lay out the products effectively on shelf; what messages to communicate at point of sale; how to optimise the impact of promotions; and identifying where the opportunities for new products lie.

Understanding the way shoppers make decisions when faced with the wide choice available in a category in a supermarket is crucial to the combined success of retailer and manufacturer. To do this well, there is a need for detailed understanding of the needs a given FMCG category is meeting for shoppers and consumers, and the way that shoppers make decisions when faced by the large number of choices presented in most FMCG categories in most stores.

A commonly used tool in these circumstances is the "decision hierarchy" which summarises the order importance of the factors which consumers consider when they are making a choice (see Figure 1 below).
In Figure 1, there appear in the column headings a number of bases for consumer decisions in choosing a typical salty snack product (e.g. flavour, occasion, time of day) and underneath each heading is listed a number of possible reasons why a consumer may choose between particular products in that category under the basis noted in the heading. This decision hierarchy illustrated here indicates that the most important factor in making a choice of a salty snack is the consumer's psychological and physical needs, followed by the time of day, followed by the kind of snacking occasion and so on.

Determining the 'decision hierarchy' for such a category, where the bases for shopping decision-making are ranked in order of overall importance to the marketplace as a whole, are determined by questioning consumers as to the process of their decision-making.

However, existing methods for understanding the consumer decision-making process are flawed. In the main, shoppers are asked what was important to them in choosing an item after they have made a choice. This forces them to post-rationalise their decision, and they are likely to reflect back a logical answer as to why they made that choice, but not necessarily what was really in their mind (perhaps subconsciously) when making that decision.

Another flaw in this approach is the assumption that a single decision hierarchy is useful in understanding any given FMCG category. In reality, data
gained in this way can be quite unhelpful in making decisions. Illustrated in Figure 2 below, for bread, one can see that useful learning (e.g. whether consumers are more concerned about the grain of bread, or whether it is sliced or not sliced) is masked by the issues of "freshness" and "price/value" which whilst always of relevance to consumers, tell the researcher nothing about how to improve the category layout. There will always be decision bases which are of overriding importance to consumers, such as "freshness" and "value" - however an over-emphasis on these points can mask the bases which actually differentiate between different product offerings.

The final issue with existing approaches is that for cost reasons, sample sizes are often simply too small to deliver robust, statistically reliable insights and to provide any depth of understanding below the top line findings.

Figure 2.

Accordingly, it is an object of the invention to provide a method for collecting market research data on a given FMCG category which provides a meaningful differentiation between the products in that category.
SUMMARY OF THE INVENTION

According to one aspect of the invention, there is provided a method for collecting market research related consumer data and analysing said data to enhance understanding of consumer behaviour when said consumers are making decisions to purchase competing products within a specific product category to meet the consumers needs at a particular shopping occasion, said method including the steps of:

posing to a consumer a series of questions designed to elicit a series of preferential choices between all competing products in a given category as presented to said consumer, on the basis of the needs of the consumer at that particular shopping occasion;

repeating the preceding step until a statistically significant number of consumers has been questioned and their answers recorded as input data to an analysis step;

analysing the data so obtained in a manner which results in the grouping of consumers, by reference to their responses, into groups distinguished by distinct patterns of choice, thereby enabling identification and understanding of the motivators of the choice behaviour of different types of consumers', when seeking to meet a particular need on a particular shopping occasion.

Preferably, the series of questions conforms to a forced choice model, wherein:

the consumer is asked to make a first choice of a product from a given category;

that choice is recorded;

the consumer is asked to make a second choice from the remainder of products in same category, having been denied their first choice;

that choice is recorded;

the above steps are repeated until the consumer's least favoured product in said category is identified.

Preferably, the data analysis stage includes identifying those consumers who display identical patterns of choice in the questioning step;

grouping those consumers together in to distinct consumer groups; and
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identifying those products which are preferentially selected by those consumers in each group.

This new invention gives companies a more robust, more complete and more rigorous understanding of how decisions are made, which they fuels better strategy in terms of the best range to stock, how the shelf is laid out, what point of sale marketing ideas make sense and where the opportunities for new products lie.

The advantageous concepts at the heart of the inventive method include the recruitment of large sample sizes, who are then asked to complete a personalised, programmed interactive questionnaire, preferably on a computer that "holds" visual images of the packaging of all of the product choices in the category (can be completed in store, at store exit, or remote from store, e.g. by the internet), which includes both "needs" questions and a choice component. The latter is preferably undertaken as a "forced choice" modelling exercise rather than through direct questioning, as per existing research techniques; thus giving a more valid and realistic output.

A further advantageous component is the derivation of clear segments of choice behaviour and the use of these to understand how the category is actually shopped by the different types of consumer so identified. Finally the inventive method links the needs being met (both consumption needs (e.g. I am feeling hungry, or bored), with shopper needs (e.g. a 'rapid top up' shopping occasion), versus a 'main, leisurely' shopping occasion). In this the inventive method provides a complete picture of shopper behaviour across the whole category in a way not provided by the prior art.

Overall the inventive method allows the market researcher to make assessment of the reasons why certain shoppers choose certain products, on the basis of direct data of actual choice behaviour, rather than by attempting an en masse analysis of the individual consumers' own ex post facto reasoning for their choice.

The inventive method brings together some key changes to the prior art methods, in a way that greatly enhances the way that categories can be understood. These include:
consumers are not asked why they made choices or what is important to them (thereby encouraging them to apply *ex post facto* rationalisation to their choices), they are instead asked to actually make choices, (i.e. ‘forced choice’) followed by analysis of the pattern of choices actually made;

• the method has been enabled by recently developed technology that allows loading of all products in a category into a questionnaire that can be followed by each individual shopper in way unique to them;

• recruitment of a large sample size, allowing in-depth analysis of the resulting data;

• the core learning about how people shop a category is achieved by segmenting the shoppers according to their choice behaviour, enabling the linking of actual choice behaviour to the needs that the shopper was aiming to meet, thereby providing insight into the better marketing strategy for the category.

Accordingly, users of the inventive method are provided with:

• a robust and valid decision hierarchy;

• a segmentation of choice behaviour into the meaningful groups of shoppers - this then shows how to best lay out the category fixture in-store;

• a range analysis showing which needs different products are meeting - this allows better point of sale communication;

• an indication of which products meet similar needs - allowing range efficiency planning and appropriate promotional ideas;

• an indication of which other categories are closely related to this category (i.e. what other products types might shoppers consider for the same need);

• an indication of how shopper choice behaviour may be different depending on the retail outlet being shopped at;
• an indication of where there are needs that only a small number of products are meeting, and hence opportunities for new ideas for product offerings;

• an indication of where price is a dominant shopper concern and therefore potentially where the opportunity for/threat of private label competition is greatest, and conversely where price is least important and hence where there is potential for premium-priced lines;

• a "before and after" analysis to show how choices might change if new products are launched, or if ranges are changed;

• an indication of potential seasonal differences, allowing optimising of ranges, e.g. for summer and winter;

• potential optimisation of ranges for different amounts of available shelf space, and for different types of retail outlet.

These are insights that have a high commercial value to users and are not readily available from prior art in-store research techniques.

In another aspect of the invention, there is provided a printed questionnaire, or set thereof, adapted to facilitate the above described method.

In another aspect of the invention, there is provided a computer program adapted to facilitate the above described method.

Now will be described, by way of a specific, non-limiting example, a preferred embodiment of the invention.

**DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT**

The invention is herein exemplified by a study to determine what consumers of prepared frozen desserts are looking for in the category, and which needs could better be met by new or improved products.

The context of the example is an interrogation of a plurality of consumers who regularly purchase frozen dessert products.

According to the invention, the shopper is asked to focus on a specific frozen dessert item bought at a specific shopping occasion. To be able to plan marketing strategy the marketer needs to understand what needs the shopper is aiming to fulfil, that impact on their choice behaviour. To do this the questionnaire
contains a battery of questions about 'shopping requirements' and 'consumer needs'.

'Shopping requirements' represent the basic parameters of the shopping trip: who was present, the type of trip, whether bought for self or others, whether a 'top up' shopping occasion, 'main' shopping occasion etc.

'Consumer needs' represent the motivation for purchasing the product in the first place, e.g. as a snack, refreshment, 'cheer me up', etc.

The consumer is then asked to "opt in" a "consideration set" by enquiring which brands, product types, flavours etc. they would have been willing ever to consider. They are then asked which they would choose if their original choice was no longer available. This is repeated until all the options are used or until the shopper chooses not to buy. At that point they are asked if they would delay purchase, buy at another store, or buy from any one of a range of other categories.

This process is repeated for a significant number of such consumers. Typically, this may involve somewhere between 500 and 1,500 respondents.

Then the choice data for each consumer is analysed according to the kind of choices made by the consumer once their successive choices are denied them. The mathematical analysis of the data allows the researcher to show for each respondent whether, once their immediately previous choice is denied, they move first to a different brand, alternative flavour or different size, and then to a different brand, flavour or size and so on. The research analyst can thus build the "decision hierarchy" for each individual respondent. By aggregating some, or all, of the consumer responses, the market researcher can determine the decision hierarchy for the whole category, or for identifiably distinct components of the category.

It is desirable to utilise a fully programmed questionnaire delivered over the internet, by PDA or on a laptop, or in a mobile research facility. This allows each respondent to identify and indicate the product they have bought and work through the choices in an order unique to them. This tool makes the process of data collection quick and cost effective.

The use of the data collection technology described above assists in enabling the collection of data from a large consumer sample. This allows a depth
of analysis of results using statistically reliable quantitative analysis. This is particularly important for obtaining meaningful insight into large categories with many different "segments" within them.

The invention then involves application of a technique of segmentation in the mathematical analysis, which involves the grouping of shoppers according to the way they make decisions. In effect, their choice process is used as the discriminating factor, so that shoppers with similar choice behaviour are grouped. It is this grouping that shows the main behaviours operating for the category, and in turn what products are preferentially selected by consumers within those categories, thus providing the manufacturer and retailer with a better understanding upon which to base decisions on how to produce an advantageous layout for the category, or to plan the range according to how it is actually shopped.

Importantly, analysis of the characteristics of consumers, and basis of the decisions they make is now enabled based on data derived from the consumer's actual decision-making process, not based on the market researcher's assumption of the consumer's desired based on the consumer's own ex post facto analysis. For example, in the figures below, it has enabled the researcher to decide that purchasing decisions are by and large based on the occasion (on a scale from 'special occasion' to 'everyday occasion') and on perceived product attributes (on a scale from 'family product' to 'indulgent product').

Now follow some example outputs showing how the results of the method described above may be presented.

Firstly, Figure 3 shows the different consumer groups which have been identified as operating in the frozen dessert market. In this case there are those consumers whose decision hierarchy stamp them as 'Everyday Health' purchasers, those who belong to a 'Cold Indulgence' purchasing profile and those who belong to a Traditional Comfort Food' purchasing profile.
As shown below in figures 4 and 5, for each segment it is possible to show the decision hierarchy for each of the purchasing groups identified above, in this case the ‘Cold Indulgence’ profile, and illustrating the products which these consumers are most likely to choose.
Figure 6 below shows an analysis of how this category can be interpreted as being driven by a 'special v. everyday' need consideration, along with the 'family v. indulgent' product attribute consideration. The product purchase profile groupings are represented by the groups of products, which are the products most likely to be selected by the members of those groupings.
This kind of analysis then allows comparison of each of the consumer groupings according to such factors as the size of the acceptable repertoire (how large a range of alternatives each grouping will buy), and which other categories each segment would consider purchasing from.

It is then possible to examine the ideal balance of products to fit the size of each segment - an analysis that is not biased by the number and type of products which have been offered on the shelf in the past (which tends to bias sales data). Figure 7 below gives an indication of how many different product options have effectively been offered for consideration to each consumer grouping, which can then be compared with collected data for the number of consumers fitting into each grouping, in order to determine whether the correct balance of products has been offered to the market, and in turn whether there may be opportunities to profitably fill any 'gaps' in the category.

Figure 7.

<table>
<thead>
<tr>
<th>Brand: Total Sample</th>
<th>Everyday Health</th>
<th>Traditional Comfor</th>
<th>Segment 3</th>
<th>Segment 4</th>
<th>Segments P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of SKU's assigned to this cluster</td>
<td>18</td>
<td>9</td>
<td>28</td>
<td>10</td>
<td>12</td>
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<tr>
<td>Proportion of choices in the category</td>
<td>23%</td>
<td>12%</td>
<td>36%</td>
<td>13%</td>
<td>16%</td>
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The consumer behaviour insights derived above can also be used to make recommendations as to the product layout on shelf which is most likely to maximise the purchase of a particular product, or of the category as a whole, by understanding which products are important to one or more of the consumer groupings. For example, in Figure 8 below, there is illustrated a suggested shelf layout which seeks to ensure that products competing directly for the attention of
individual product groupings are placed close to one another to ensure they receive equal attention from consumers in the relevant grouping.

Figure 8.
THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A method for collecting market research related consumer data and analysing said data to enhance understanding of consumer behaviour when said consumers are making decisions to purchase competing products within a specific product category to meet the consumers needs at a particular shopping occasion, said method including the steps of:

- posing to a consumer a series of questions designed to elicit a series of preferential choices between all competing products in a given category as presented to said consumer, on the basis of the needs of the consumer at that particular shopping occasion;

- repeating the preceding step until a statistically significant number of consumers has been questioned and their answers recorded as input data to an analysis step;

- performing an analysis step by analysing the data so obtained in a manner which results in the grouping of consumers, by reference to their responses, into groups distinguished by distinct patterns of choice, thereby enabling identification and understanding of the motivators of the choice behaviour of different types of consumers', when seeking to meet a particular need on a particular shopping occasion.

2. The method of claim 1, wherein the series of questions conforms to a forced choice model, wherein:

- the consumer is asked to make a first choice of a product from a given category;

- that choice is recorded;

- the consumer is asked to make a second choice from the remainder of products in same category, having been denied their first choice;
that choice is recorded;

the above steps are repeated until the consumer's least favoured product in said category is identified.

3. The method of claim 1 or claim 2, wherein the data analysis stage includes identifying those consumers who display identical patterns of choice in the questioning step;

grouping those consumers together into distinct consumer groups; and

identifying those products which are preferentially selected by those consumers in each group.

4. A printed questionnaire, or set thereof, adapted to facilitate the method of any preceding claim.

5. A computer program adapted to facilitate the method of claims 1, 2 or 3.
INTERNATIONAL SEARCH REPORT

INTERNATIONAL APPLICATION No.
PCT/AU2006/001263

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl.

G06Q 90/00 (2006.01)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic database consulted during the international search (name of database and, where practicable, search terms used)

DWPI, USPTO, GOOGLE (KEYWORDS): RANK+, ORDER+, RATE OR RATING, PREFER+, CHOICE OR CHOOSE 5 QUESTIONNAIRE, SURVE+, GROUP+, COHORT+, DEMOGRAPH+, BEHAVIO+, DECISION, PROFE+ MARKET RESEARCH+, QUESTION+, ANSWER+, ONLINE, INTERACTIVE, INTERNET, ELECTRONIC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
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Further documents are listed in the continuation of Box C

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<tr>
<td>'E'</td>
<td>earlier application or patent but published on or after the international filing date</td>
</tr>
<tr>
<td>'L'</td>
<td>document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td>
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<tr>
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<td>document referring to an oral disclosure, use, exhibition or other means</td>
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<tr>
<td>'P'</td>
<td>document published prior to the international filing date but later than the priority date claimed</td>
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| 'C' | document member of the same patent family |

Date of the actual completion of the international search 28 November 2006

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Name and mailing address of the ISA/AU

AUSTRALIAN PATENT OFFICE
PO BOX 200, WODEN ACT 2606, AUSTRALIA
E-mail address: pct@ipaustralia.gov.au
Facsimile No. (02) 6285 3929

Authorized officer

STEPHEN LEE
Telephone No: (02) 6283 2205

Form PCT/ISA/210 (second sheet) (April 2005)
This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

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Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.

END OF ANNEX