A combination of several analytical computer-assisted modeling techniques may be used to evaluate the performance data of an entity, its relative performance within a classification of the entity and to identify opportunities to improve performance of the entity. Subtleties in entity performance can be determined by use of regression analysis on the applied modeling techniques to link the results of the same together. The present invention can be applied to evaluate the value of a brand, the relative value of competitive brands and can be used to identify the opportunities to increase brand value and the priority of those opportunities. Image/Attitudinal driver analysis, pyramid analysis, probability analysis, trade-off analysis, and other regression techniques may be used in novel combinations to quantify brand development, impacts and the overall estimate of brand value. For example: (1) image driver analysis may be applied to each level of a brand pyramid to understand how to most effectively move customers through to the next level in the pyramid; (2) probability analysis may be used to estimate the impact of each movement through the pyramid; and (3) tradeoff analysis may be used to improve the value customers perceive at any particular level of the pyramid.
Title: A SYSTEM AND METHOD FOR ANALYSING PERFORMANCE DATA

Abstract: A combination of several analytical computer-assisted modeling techniques may be used to evaluate the performance data of an entity, its relative performance within a classification of the entity and to identify opportunities to improve performance of the entity. Subtleties in entity performance can be determined by use of regression analysis on the applied modeling techniques to link the results of the same together. The present invention can be applied to evaluate the value of a brand, the relative value of competitive brands and can be used to identify the opportunities to increase brand value and the priority of those opportunities. Image/Attitudinal driver analysis, pyramid analysis, probability analysis, trade-off analysis, and other regression techniques may be used in novel combinations to quantify brand development, impacts and the overall estimate of brand value. For example: (1) image driver analysis may be applied to each level of a brand pyramid to understand how to most effectively move customers through to the next level in the pyramid; (2) probability analysis may be used to estimate the impact of each movement through the pyramid; and (3) tradeoff analysis may be used to improve the value customers perceive at any particular level of the pyramid.
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.
A SYSTEM AND METHOD FOR ANALYSING PERFORMANCE DATA

BACKGROUND OF THE INVENTION

[0001] The present invention relates to a system and method for analyzing performance data. One significant but non-limiting area of application of the present invention is to marketing, and specifically to a method of combining several computer-based modeling techniques to evaluate the drivers of brand value, to quantify the impact of brand development activities, and to drive brand investment decisions that may optimize business performance and value creation.

[0002] Brand value management requires understanding how all interactions with customers—not just advertising or trademarked logos—contribute to customers' perception of the brand and as a result, have an impact on the company's brand value. Brand value management helps brand owners to answer some critical questions, such as:

- What is driving the value of the brand?
- How much of a premium price (if any) can the brand command?
- How much does the brand affect customer choice?
- Is it worth investing more in the brand?
- Where should money be spent in order to maximize value?

[0003] Generally speaking, brand value management may have several goals. For example, it may seek to quantify the existing value of the brand based on its strengths and weaknesses. It may also work to optimize brand positioning against current/emerging market needs or preferences. Competitive positioning may be identified and managed as part of brand value management, and action plans may be developed. Brand value management may also include quantifying the benefits of various investments to increase the value of the brand.

[0004] Results of successful brand value management may include: increased market
share, higher profitability, reduced customer churn, higher-value customer base, more cost-effective marketing, greater share of customer wallet, and the ability to generate new revenue streams, among others.

[0005] In the past, there have been focused brand analysis systems that use specific techniques to assess the factors that impact brand value. However, the Marketing Leadership Council (Washington D.C.) reports that “no single measurement approach successfully answers both why brand building is an investment worth senior management’s attention and how marketers should allocate dollars across various brand-building investment options.” Research supports this assertion. A recent study shows that nearly three quarters of marketing executives in the U.S. and U.K. believe their company cannot effectively measure campaign return on investment (ROI).

[0006] It is an object of the present invention to overcome at least some of the above described problems.

BRIEF SUMMARY OF THE INVENTION

[0007] The inventors have appreciated that in the non-limiting context of marketing a holistic, analytical system is needed that can provide an answer to how marketing dollars should best be spread across various brand messages. They have also appreciated that a way to quantify brand development opportunities or impacts using a combination of analytical techniques can be provided as well as a method to understand the impact of customers moving up through a brand pyramid’s tiers. Another need in the art appreciated first by the present inventors is a way to link brand drivers to pricing. A different yet related need appreciated by the inventors is a method to develop brand pyramids that are optimized for particular brands or industries, and brand pyramid archetypes to understand general brand relationships for a type of brand, for a geographic area, for an industry, or other characteristic.

[0008] The present invention resides in the appreciation by the inventors that a combination of analytical techniques may be used to generate new insights into the
extent to which various factors affecting brand experience have an impact on the image of the brand and on customer's behavior. This added intelligence allows a company to make better decisions about the business capabilities to invest in that will increase brand value and maximize profits. Image/equity analysis, customized brand pyramid analysis, brand pyramid conversion analysis, trade-off analysis, econometric analysis, behavioral analysis, probability analysis, and pyramid clustering techniques may be used in combination and synthesized to quantify and guide brand development decisions. Combining and synthesizing these analysis techniques may be used to: build a tailored brand pyramid having a specialized number of tiers and specialized tier definitions; analyze how efficiently and effectively customers move (i.e., "convert") through each level of the brand pyramid; calculate probabilities of success of affecting specific variables to drive customers through the pyramid; prioritize and quantify development opportunities; and determine the relationships between brand drivers and increments in price.

Another aspect of this invention is to cluster multiple brand pyramids created for a given variable (e.g., geography, customer segment, industry, etc.). By analyzing the comparative likeness of the pyramids, they may be grouped into a series of archetype clusters based upon one or more common characteristics. The clustering allows discrete marketing strategies to be defined for each archetype.

According to another broader aspect of the present invention there is provided a system for analysing raw performance data regarding an entity to determine factors which have the greatest effect on the performance of said entity; the system comprising: means for receiving and storing raw performance data; means for selecting and executing a first analytical computer-assisted modeling technique on said raw performance data; means for selecting and executing a second analytical computer-assisted modeling technique on said raw performance data; and means for linking the results of the first and second analytical computer-assisted modeling techniques through a regression analysis algorithm to determine the relative impact independent factors have on the performance of the entity.
By raw performance data it is meant data which has yet to be analyzed by the system and data which is typically generated as a result of each individual interaction with the entity.

According to another equivalent aspect of the present invention there is provided a method of analyzing raw performance data regarding an entity to determine factors which have the greatest effect on the performance of said entity; the method comprising: receiving and storing raw performance data; selecting and executing a first analytical computer-assisted modeling technique on said raw performance data; selecting and executing a second analytical computer-assisted modeling technique on said raw performance data; and linking the results of the first and second analytical computer-assisted modeling techniques through a regression analysis algorithm so as to determine the relative impact independent factors have on the performance of the entity.

A further aspect of the present invention provides a system for evaluating different options for improving the performance of an entity, the system being arranged to process raw performance data regarding the entity and to calculate the benefit and cost associated with each option, the system comprising: means for establishing a multi-tier hierarchically graded data pyramid of the raw performance data customized to the entity and to a technical classification of that entity, wherein the performance of the entity can be categorized by the hierarchical grade of the data pyramid; means for determining conversion rates between adjacent tiers of the multi-tier data pyramid customized to the entity and to a technical classification of that entity; means for performing image/equity analysis on the raw performance data to determine the options that are available to improve the performance grade of the entity from being categorized by one tier of the pyramid to being categorized by another tier; and means for performing probability analysis on the options, thus determining a level of certainty that affecting a chosen option will cause movement through the data pyramid, thereby quantifying a benefit or loss of changing the chosen option.
According to another aspect of the present invention there is provided a system for identifying and quantifying factors related to an improvement in the performance of a specific entity or type of entity, the system being arranged to process raw performance data regarding the entity and comprising: means for establishing a multi-tier hierarchically graded data pyramid of the raw performance data customized to the entity and to a technical classification of that entity, wherein the performance of the entity can be categorized by the hierarchical grade of the data pyramid; means for identifying specific instances in the raw performance data where there has been a conversion from a first tier of the data pyramid to a second higher tier of the pyramid; and means for applying an image/equity analytical modeling technique to determine the factors that are responsible for the improvement in the performance grade of the particular instance of the entity from the first to the second tier of the pyramid.

According to another aspect of the present invention there is provided a system for predicting an impact of changing a user-controllable variable of a complex entity on the performance of that entity, the system comprising: means for receiving performance information identifying key factors which have a significant on the performance of the entity, and means for performing a regression analysis on the received performance information and a plurality of predetermined values of the user-controllable variable; and means for determining from the results of the regression analysis an association between the performance of the entity and the value of the performance information such that the impact of changing the value of the variable can be determined.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a diagram showing the cyclical changes to and impacts of a brand.

Figure 2 is a diagram showing some of the possible factors driving the brand cycle.

Figure 3 is a flowchart of one embodiment of the present invention.

Figure 4 is an image perceptual map showing imagery data in which client brand
X is not differentiated from brands B and C.

[0020] Figure 5 is an image perceptual map showing imagery data in which client brand X is differentiated from brands B and C.

[0021] Figure 6 is a diagram of an image pyramid.

[0022] Figure 7 is a diagram of a conversion pyramid corresponding to the image pyramid of Figure 6.

[0023] Figure 8 is a diagram of a GUI for a probability analysis system.

**DETAILED DESCRIPTION OF EMBODIMENTS THE INVENTION**

[0024] There are several ways to conceptualize a brand, its relationship in the market, and its dependence on customer opinion. Figure 1 is a diagram showing one such conceptualization, referred to as "The Brand Cycle." As the figure demonstrates, brand experiences 105 may have an impact on a brand 110. The impact may be the formulation of one or more images for the brand 115 by customers. These images may be positive, negative, or neutral. The totality of the brand's image may form the basis of its value 125. The behavior of customers may be affected by their perception of the brand 120. Customer behavior may then impact the company's sales and profit 130, which can then be funneled back into the marketing cycle as investments 135 to invest in capabilities that may further impact customers' experience with the brand. When speaking of the cycle shown in Figure 1, a customer may be a consumer in a B2C transaction or a business in a B2B transaction.

[0025] While Figure 1 shows the brand cycle generically, the actual factors driving the cycle may vary for different brands in different industries. Figure 2, shows exemplary factors from one hypothetical brand (shown as "Brand X"). Here, customers perceptions are shaped by their exposure and reaction to Brand X via ads, promotions, in-store displays, sponsorship of events, and the like. Customer surveys may reveal that based on these experiences, customers tend to hold an image that Brand X offers, for example high quality for good value or is trendy and reliable. These images may help to booster the brand's value. Conversely, if customers' images of a brand are that
it is unreliable, outdated and of moderate value, then such images may work to diminish the brand’s value.

[0026] Positive perceptions of brands may encourage positive customer behavior. Thus, in Figure 2, the various images for Brand X result in customers being willing to buy the product again, recommend it to others, and to try other products marketed under the same brand. Because of the impact brand image may have on customer action, a company can benefit from understanding which factors have the greatest impact on creating a positive brand image. The large sums of money that are spent on marketing and other activities to build a brand’s image make it even more important to understand the drivers of brand value and to quantify impact of brand development activities. Analytical techniques may be used to generate new insights into customers’ perceptions, customers’ behaviors and the “levers” that can be pulled to increase the perception and resulting profit/value/equity generated from a brand. One of the invention’s goal is to guide brand investment decisions that will optimize business performance and value creation. Through the use of a combination of analysis techniques, the present invention may assist a person to understand the extent to which the various factors affecting brand experience have an impact on the image of the brand and on customers’ behavior. This information may provide a person with insight on what actions are likely to improve the customer’s perception of the brand.

[0027] The present invention may be used by a person (from an image consulting company, a marketing services provider, an internal marketing department, etc.) to apply analytical techniques to the framework of the brand cycle in order to guide brand management decisions. In one embodiment, the person may generally follow a multi-step process, which may consist of some or all of the steps shown in the flowchart of Figure 3. In that flowchart, a person may leverage existing brand imagery data or collect such data 305 & 310. Imagery data may be used to analyze customers’ perceptions of a brand 315. A brand pyramid may be created 320 and data may be applied to the various tiers of the pyramid 325.

[0028] The number of tiers and the definition of each tier may be customized for each brand and industry. While some tiers generally may be re-used for different customized
brand pyramids, other tiers may be unique to a specific brand or industry. One tier that may be useful in various situations is "behavioral loyalty". Behavioral analysis may be used to evaluate data collected about customer behaviors (such as purchase frequency, purchase amount, purchase location, etc.) in order to identify those customers who exhibit a certain threshold of "behavioral loyalty" and who represent a profitable segment of customers.

[0029] After the data has been applied to the various tiers, if the data doesn't support an acceptable pyramid shape 330, then the pyramid may be refined 335. In prior systems, data was not always available to create certain tiers of the pyramid, preventing the creation of a customized brand pyramid. In the present invention, certain data may be used as a proxy to define remaining tiers needed to complete a customized brand pyramid. For example, information is not readily accessible that defines the customers who might have "considered [a] product". However one may use data on "unaided awareness" as a proxy for those people who would belong to the "considered product" tier.

[0030] A customized brand pyramid is useful because it more accurately reflects the purchasing, attitudinal, and marketing dynamics in the marketplace. Once an acceptable customized pyramid is developed, a conversion figure may be created which highlights how efficiently and effectively customers are moving up the pyramid tiers 340. Findings from the brand image/equity analysis and the brand pyramid may be the subject of a trade-off analysis 345. Econometric analysis may be run to calculate the weighting associated with the factors causing the conversion from one tier to the next. Recommendations may be further tested using probability analysis 350. In other embodiments of the invention, the person may choose to apply only one or more of these steps, or may choose to proceed through the steps in a different order. The steps as shown in Figure 3 will now be explained.
BRAND IMAGERY ANALYSIS (STEPS 305 – 315 OF FIGURE 3)

[0031] In one embodiment of the invention, the person may perform brand imagery analysis to gain insight into the drivers of customers' opinions about a brand. This form of analysis may also be referred to as image/equity analysis since it identifies the components of equity in the brand that have financial meaning or relevance. For example, performing image/equity analysis on a “behavioral loyalty” tier of the customized pyramid, may be done to determine the drivers/factors affecting the behavior of such a profitable customer segment. To perform such image/equity analysis, one must possess market data about the brand and the competing brand(s) in question. In some situations, the brand owner may have gathered the market data already to be used for the analysis, either expressly or as a result of conducting one of several standardized surveys or attitudinal studies. In other situations, the data may not yet exist and so the person may form a hypothesis of the drivers of brand opinion and then conduct primary research to gather the data needed to conduct the analysis to validate or improve the hypothesis.

[0032] Once the person has possession of valid market data for the brand and the competing brand(s), the person may perform regression analysis, which is a statistical technique applied to data to determine the relative impact independent variables have on an end result. Since regression analysis measures how an outcome will be affected by changes in input conditions, the technique may be used to evaluate the effect on brand opinion based on customers' reactions to images of the brand and the competing brands. Such analysis may provide insight into the possible areas for investment to enhance the brand's image and value.

[0033] One deliverable from imagery analysis may be an image perceptual map, which shows how well differentiated a brand is and on what basis. Figures 4 and 5 illustrate two such maps, where the client’s Brand X is compared to competing Brands B, C, and D. In Figure 4, Brand X is undifferentiated, while in Figure 5 it is highly differentiated, especially on ‘service ease’ and ‘relationship’ factors.
BRAND PYRAMID ANALYSIS (STEPS 320 TO 330 OF FIGURE 3)

[0034] The user may construct a brand pyramid to graphically illustrate customers’ affinity with a brand (or brand’s image) and how certain numbers of customers move along the spectrum of affinity from a lesser to a greater affinity with the brand. Such a brand pyramid is created as a series of tiers, where the goal is to have each of the tiers generally smaller than the tier below it. Figure 6 is an example of a brand pyramid. It shows a brand pyramid having nine tiers chosen to describe a customer’s relationship with Brand X. The tier describing the lowest level of affinity (i.e., “aware”) measures the percentage of people surveyed who were aware of Brand X’s existence, which in this case is 96.2%. The next tier, indicating a somewhat stronger affinity, is “familiar” to show that 92.8% of respondents were not only aware of Brand X but were also familiar with the brand. The strongest affinity are the 7.2% of those surveyed who are behaviorally loyal to the brand. To build such a pyramid, the person may use an iterative technique of creating potential tiers and then populating the tiers based on the customer data to see if the tiers generally represent a pyramid. If not, the person may refine the tiers (by changing their labels or by changing the number of tiers) until the person is satisfied with the results.

[0035] Certain prior art systems also refer to brand pyramids or image pyramids. However, such systems either use the term ‘brand pyramid’ to represent a different concept, or such pyramids lack the novel features of the present invention. For example, one consulting firm uses a brand pyramid to describe brand meaning. That firm’s pyramid consists of five levels, namely: Mark of Specification, Mark of Assurance, Moments of Choice, Mark of Association, and Emotional Involvement. A second prior art brand pyramid uses the tiers to represent questions about a brand. For example, the base level is known as “What are the tangible, verifiable, objective, measurable characteristics of the products, services, ingredients or components that carry this brand name?” Yet a third prior art brand pyramid is called the BrandDynamics pyramid. The BrandDynamics pyramid has five tiers. The base tier is “Presence”. The remaining four tiers are Relevance, Performance, Advantage, and Bonding.
Such prior art brand pyramids are static graphical methods for brand conceptualization. Users of these systems re-use the same pyramid concepts for each analysis project. In contrast, the present invention overcomes the inherent restrictions of such static, uncompromising pyramids. In the present invention, a personalized brand pyramid may be created, having a number of tiers and having each tier represent a feature, relationship, or other factor, as appropriate to the specific brand in question. Thus, while Figure 6 shows a brand pyramid for Brand X where there are 9 tiers for such factors as “aware” and “familiar”, a pyramid for Brand Y may contain, for example, 5 or 15 tiers as appropriate based upon the market data where each tier represents a factor chosen by the person.

Once the brand pyramid is created based on customer data, a conversion figure may also be created by analyzing the population of the various pyramid tiers. The conversion figure highlights the movement of customers up the pyramid tiers by displaying the percentage of conversion from the previous tier. Figure 7 shows such a conversion graphic. Here, each tier represents the percentage of surveyed people who remain from the previous tier. In other words, Figure 6 shows that 96.2% of the people are aware but only 92.8% are both aware and familiar. Figure 7 shows that 96.2% of the people are aware, but that only 96.5% of this aware group is also familiar to Brand X. Thus, the tiers of Figure 7 show the propensity/probability of a customer to convert/move along the spectrum of a customer’s affinity with the brand. This representation of the data may be used to identify and pinpoint areas that are critical for marketing to improve the brand’s perception, sales and/or profits. For example, as Figure 7 shows that there is a large drop in conversion from customers who “buy” versus those who “buy” and are also “satisfied.” This indicates that focusing on satisfaction may be necessary and that any such investment has the potential of yielding a good return.

The conversion pyramid analysis may involve understanding why a certain group of customers bought a product while another group did not. A first step to determine this may be to find the brand images and the customer needs that caused the purchasing group to buy the product. The types of media associated to the brand
image may also be tracked. For example, one may analyze whether certain print
advertisements affected a conversion of a group of customers while banner ads did not.

TIER BY TIER ANALYSIS (STEP 340 OF FIGURE 3)

[0039] Using the present invention, a person may perform a rigorous analysis of the
brand pyramid by performing further image/equity analysis against each tier of the
pyramid. The customers at each level of the pyramid may be identified. Then
image/equity analysis may be performed against that customer subgroup to understand
the specific factors that result in that subgroup having moved from the prior level to that
level of the pyramid. This level-by-level approach may assist a person to understand
what causes customers to move through the pyramid to the next level. Knowing this
information can be insightful in how to further improve the brand's value/perception. For
example, the person may begin by analyzing the "Aware" tier of the pyramid. To do
this, the person may isolate the market data for the 96.2% of the customers who belong
to the "Aware" tier. The person may then analyze the image factors from Figure 5's
image map to see which factor or factors drive a customer to belong to the "Aware"
level. For example, this analysis may find that the "Service Ease" image factor may be
a driving force at this particular level. The person may then move to the "Familiar" tier
and isolate the 92.8% of customers who belong to this level. Synthesizing the image
factors with data for this level's customers may help the person identify that the
"Relationship" factor (for example) drives a person to move up the pyramid from
"Aware" to "Familiar". After the "Familiar" level is analyzed, the person may move to the
"High Opinion" level, and so forth up through the rest of the pyramid. The results of this
synthesized analysis are primary image factors for each of the pyramid's tiers, which
may show that different tiers are affected by different factors. In other words, such in-
depth analysis may show that improving just one image factor may not be a panacea.

[0040] As part of this combination analysis, a person may ensure that only the
appropriate customer data is used for each level. For example, in analyzing how a
certain image factor relates to the lowest "Aware" tier of Figure 6, only the data for the
96.2% of the customers surveyed would be included in the calculations. Then, when
analyzing the “Familiar” tier, only the data for the 92.8% of the appropriate customers would be included. Such a tier-by-tier analysis, in which only data for each tier’s customers is used, was not considered in any prior art system.

[0041] By using a combination of techniques, the person may be able to identify some of the most pressing needs hampering the brand’s value, to explain gaps between client and competitor pyramids, to identify key opportunities for brand development, and/or to understand brand’s position in the competitive landscape. For example, while prior art systems would, at most, apply image/equity analysis to the pyramid as a whole and present the client with a chart showing the progress of brand opinion, the present invention allows the person to pinpoint that the “Satisfied” and the “Intend to Purchase” groups should be focused on in order to improve the brand, for example. Furthermore, as previously mentioned, prior art systems would have applied any analysis to the static, pre-defined pyramid rather than to the present invention’s brand-tailored pyramid.

TRADE-OFF ANALYSIS (STEP 345 OF FIGURE 3)

[0042] Once at least some of the pyramid levels are analyzed using image/equity analysis to determine the imagery drivers, the person may apply trade-off analysis (for example a conjoint analysis technique) to evaluate the trade-offs between trying to improve one factor over a second factor. In one embodiment, the person may combine customers’ product feature ratings with a hypothetical product selection process in order to understand trade-offs between focusing on the “Relationship” factor in the hopes of increasing membership to the “Buy” level versus focusing on the “Service Ease” factor in the hopes of increasing membership to the “Satisfied” level (for example). Such a trade-off analysis may assist the person in deciding which factors should be focused on in order to have the greatest overall influence the brand’s value/perception.
ECONOMETRIC ANALYSIS AND PROBABILITY ANALYSIS TO UNDERSTAND IMPACT OF MOVEMENT THROUGH THE PYRAMID (STEP 350 OF FIGURE 3)

[0043] Other types of analysis may be performed on the brand pyramid, such as regression analysis. One form of regression analysis is econometric analysis, such as econometrically-driven return-on-investment analysis. Through econometric regression analysis, the impact of different marketing activities on revenues or profits are identified. Those effects may be parsed out in order to describes the discrete effect of each lever affecting revenue or profits and to compare each lever against the cost of the lever. A return-on-investment then can be calculated for each lever.

[0044] A user may use econometric and/or probability analysis to calculate the cost/benefit of focusing on one or more factors. Time series, cross-sectional regression analysis may be used to identify the impact of marketing activities on revenue and profits. By parsing out the effect each marketing factor has on costs and profits, return-on-investment may be derived for each lever. Probability analysis may be used to calculate the probability that someone is going to convert or not convert from one tier to the next, based on a regression equation. For example, analysis may result in a finding that if quality goes up by a certain percent, then there is an average probability of converting the customers to the next tier of the pyramid. Such probability analysis may be powerful because it can reflect the distribution of data that one has collected about how customers feel, what they believe and how they will likely respond. In other words, the probability analysis may analyze real, observed, attitudinal data rather than simply analyzing sales or other historical data. Whereas image/equity analysis and tradeoff analysis (described above) produce an understanding of the factors and econometric analysis provides the coefficient amount, the probability analysis of this step may provide an understanding of a level of certainty for the effect of the factors.

[0045] In other embodiments, regression analysis may be performed to link image or other brand drivers to pricing power (i.e, the ability of a brand to raise its price). Such regression analysis on image driver data and a series of price increments (obtained from survey data or tradeoff analysis, for example) may allow a person to understand
how to increase the power of the brand in order to enable a certain price increase. For example, the results of one hypothetical regression analysis activity may determine that if a company closes the gap between its branded product and a competitor's branded product by 7%, then a price increase of 1% is justifiable.

[0046] Figure 8 is an illustration of a user interface from a probability simulator that may be used for such probability analysis where a certain number of scenarios are generated in order to compute an average probability that a customer will, for example, move from one tier to the next tier in a brand pyramid. In Figure 8, the simulator is shown simulating the total incremental gross revenue for a brand, but of course other simulators could be made. The simulator 800 shows a person the number of times that the simulator selected a random estimate of the assumptions. Thus, for the displayed chart 840, 1000 trials of random assumptions were calculated 805. The x-axis of the chart 840 shows the estimated revenue or value of the brand 845. The y-axis shows the probability that the revenue estimate will occur 810 and the number of times (i.e., the frequency) that the total revenue estimate occurred during the trials 815. The user may slide the two anchors 820 to restrict the range of results. The accuracy (i.e., the certainty) 830 of the simulation may be displayed to the user.

ASSESS FINDINGS (STEP 355 OF FIGURE 3)

[0047] Using the results of various simulations, the person may generate a series of findings to be presented to the brand owner 355. The findings may assist the brand owner to understand the impact various marketing changes may have on the brand’s value or its perception by customers.

[0048] In one embodiment of the invention multiple types of analysis may be synthesized to better quantify brand development for the brand owner. For example, two, three or more of the following types of analysis activities may be performed and their results synthesized for a better picture of the brand value: building a tailored brand pyramid having a specialized number of tiers and specialized tier definitions; analyzing drivers of customer movement through the brand pyramid; calculating probabilities of
success of driving customers through the pyramid; identifying development opportunities; performing probability simulations; prioritizing development opportunities; estimating an overall value for the brand; and performing regression analysis to determine the relationships between brand drivers and increments in price.

This assessment phase varies depending on the combination of analysis techniques chosen, as described above. The following table summarizes some of the possible combinations and the type of assessment that may result from the combined analysis:

<table>
<thead>
<tr>
<th>Types of analysis combined</th>
<th>Possible assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>brand pyramid conversion + image/equity analysis</td>
<td>understand the drivers behind why customers move from one tier of the brand pyramid to another tier, for determining how to increase attitudinal and behavioral loyalty</td>
</tr>
<tr>
<td>brand pyramid conversion + image/equity + tradeoff</td>
<td>understand the trade-offs between factors (i.e., drivers) causing a group of customers to move from one tier of the brand pyramid to another tier</td>
</tr>
<tr>
<td>brand pyramid conversion + econometric + image/equity</td>
<td>understand the relative weighting of drivers causing a group of customers to move from one tier of the brand pyramid to another tier</td>
</tr>
<tr>
<td>brand pyramid conversion + image/equity + probability</td>
<td>understand an estimate of the value based on a range of probabilities that a group of customers will move from one tier of the brand pyramid to another tier</td>
</tr>
</tbody>
</table>
Pyramid clustering is another way to assess findings and to discover unique opportunities for brand development. In one embodiment of the invention, a certain set of pyramids may be created for a given variable or variables. For example, a brand pyramid may be created for each country where the brand is used. Or as another example, a brand pyramid may be built for each of a number of customer segments, industries, or products. The brand pyramids that make up the set may differ in respect to the number of tiers, the characteristics associated with the tiers, the size of the tiers, the relative proportion of the tiers to other tiers in the same pyramid, etc. A person may generate a series of archetype pyramids in the hopes of grouping all of the pyramids based on certain common characteristics into one of the archetypes. Initially, the archetypes are based on hypothesis. Once the person assigns each of the pyramids to an archetype, the archetypes' definitions may be refined and the pyramids redistributed among the archetypes. These steps may be repeated until the archetypes and their members are acceptable to the person. By successfully clustering the pyramids into the archetypes, the person may be able to offer a company assessments that differ among the archetypes. For example, image/equity analysis may be performed on each of the archetypes for generating insight about the preferred marketing techniques for the brand pyramids that are members of the different archetypes. Instead of image/equity analysis, the person may perform cluster analysis, factor analysis, decision tree analysis, or another type of statistical analysis.

As one example of creating archetypes and clustering the pyramids among them, suppose a company has data for customers from 64 countries. Rather than analyze and create a marketing plan for each of the 64 countries individually, the process of clustering the data into a certain number of archetypes may allow a marketing department to deploy a small number of marketing strategies. For example, by analyzing the comparative likeness of the 64 pyramids, six archetype clusters may be created through clustering. Six different marketing strategies may then be delivered to the company, based on the drivers for each archetype. For example, members of the first archetype may be marketing in an attempt to raise awareness in the product. Members of the second archetype may be offered the product at a higher price, and
members of the third archetype may have marketing targeted to them in order to increase the perception of quality.

[0052] The foregoing description addresses embodiments encompassing the principles of the present invention. The embodiments may be changed, modified and/or implemented using various types of arrangements. Those skilled in the art will readily recognize various modifications and changes that may be made to the invention without strictly following the exemplary embodiments and applications illustrated and described herein, and without departing from the scope of the invention, which is set forth in the following claims. For example, the analysis tool shown in Figure 8 may be programmed to run on a general purpose Windows-based personal computer. Or the tool may be created on a Unix, Mac or other computer platform, for example. While the person's process is described above in four general steps, the process may be accomplished in a different number of steps, or in a different order. Other variations of the present invention are also possible.

[0053] The present invention is not restricted to analysis of brand value. It can be used in any field of performance analysis where technical data describing the operation or reaction of an individual processing element to an entity is available. For example, in a factory where there are a plurality of different types of individually functioning machines processing the entity and generating and storing raw performance data. In this case, the present invention can be used to determine subtle factors affecting the performance which are not readily apparent from performing a single performance analysis as in the prior art. It is also to be appreciated that many of the inventive features recited in the appended claims have been described explicitly in the context of brand value management herein. However, these supporting examples are to be considered in a broader context as providing support for the equivalent broader claim.
Claims

1. A system for analysing raw performance data regarding an entity to determine factors which have the greatest effect on the performance of said entity; the system comprising:

   means for receiving and storing raw performance data;

   first modeling means for selecting and executing a first analytical computer-assisted modeling technique on said raw performance data;

   second modeling means for selecting and executing a second analytical computer-assisted modeling technique on said raw performance data; and

   linking means for linking the results of the first and second analytical computer-assisted modeling techniques through a regression analysis algorithm to determine the relative impact independent factors have on the performance of the entity.

2. The system of Claim 1, wherein the first and second modeling means are arranged to choose and execute modeling techniques selected from the group comprising image/equity analysis; customized pyramid analysis; trade-off analysis; probability analysis; econometric analysis; behavioral analysis; and pyramid conversion analysis.

3. The system of Claim 2, wherein the first or second modeling means is arranged to execute an image/equity analysis as the first or second respective modeling technique and the system further comprises display means for displaying a graphical image which shows the results of the first or second analytical computer-assisted modeling technique on said raw performance data to assist in determining the degree of importance of each factor to performance of the entity.

4. The system of Claim 2, wherein the first or second modeling means is arranged to execute a pyramid conversion analysis as the first or second respective modeling
technique and the system further comprises display means for displaying a graphical image of hierarchically graded raw performance data comprising a plurality of tiers.

5. The system of Claim 4, wherein the display means is arranged to enable a user to select the number and categories of hierarchically graded data tiers with the pyramid to be displayed.

6. The system of Claim 5, further comprising means for enabling proxy data from a substitute category to be used to create one or more of the hierarchically graded data tiers when the required category data is not available from the raw performance data.

7. The system of any of Claims 4 to 6, wherein the second modeling means is arranged to execute the second modeling technique on a single tier of the hierarchically graded data.

8. The system of any preceding claim, wherein the first modeling means is arranged to implement a pyramid conversion analysis as the first modeling technique and the second modeling means is arranged to implement an image/equity analysis as the second modeling technique; and

    wherein the linking means is arranged to use the regression analysis result to allow a user to understand the steps that are necessary in order to improve the grade of the entity from being categorized by one tier of the pyramid to being categorized by another tier of the pyramid.

9. The system of any of Claims 1 to 7, further comprising:

    third modeling means for selecting and executing a third analytical computer-assisted modeling technique on said raw performance data;
wherein the first modeling means is arranged to choose and execute a pyramid conversion analysis, the second modeling means is arranged to choose and execute an image/equity analysis and the third modeling means is arranged to choose and execute a tradeoff analysis;

wherein the linking means is arranged to use the regression analysis result to allow a user to understand the trade-offs between factors causing the grade of the entity to improve from being categorized by one tier of the pyramid to being categorized by another tier.

10. The system of any of Claims 1 to 7, further comprising:
    third modeling means for selecting and executing a third analytical computer-assisted modeling technique on said raw performance data;

    wherein the first modeling means is arranged to choose and execute a pyramid conversion analysis, the second modeling means is arranged to chose and execute an econometric analysis and the third modeling means is arranged to choose and execute an image/equity analysis;

    wherein the linking means is arranged to use the regression analysis result to allow a user to understand the relative weighting of factors which cause the grade of the entity to improve from being categorized by one tier of the pyramid to being categorized by another tier.

11. The system of any of Claims 1 to 7, further comprising:
    third modeling means for selecting and executing a third analytical computer-assisted modeling technique on said raw performance data;

    wherein the first modeling means is arranged to choose and execute a pyramid conversion analysis, the second modeling means is arranged to chose and execute an image/equity analysis and the third modeling means is arranged to choose and execute a probability analysis;
wherein the linking means is arranged to use the regression analysis result to allow a user to understand an estimate of the performance of the entity based on a range of probabilities that the grade of the entity will improve from being categorized by one tier of the pyramid to being categorized by another tier.

12. The system of any of claims 1 to 7 and 11, wherein either the first or the second modeling means is arranged to choose and execute a probability analysis and the system further comprises a probability simulator for generating a graphical output showing the result of the probability analysis to the user.

13. A system for evaluating different options for improving the performance of an entity, the system being arranged to process raw performance data regarding the entity and to calculate the benefit and cost associated with each option, the system comprising:

   Means for establishing a multi-tier hierarchically graded data pyramid of the raw performance data customized to the entity and to a technical classification of that entity, wherein the performance of the entity can be categorised by the hierarchical grade of the data pyramid;

   Means for determining conversion rates between adjacent tiers of the multi-tier data pyramid customized to the entity and to a technical classification of that entity;

   Means for performing image/equity analysis on the raw performance data to determine the options that are available to improve the performance grade of the entity from being categorized by one tier of the pyramid to being categorized by another tier; and

   Means for performing probability analysis on the options, thus determining a level of certainty that affecting a chosen option will cause movement through the data pyramid, thereby quantifying a benefit or loss of changing the chosen option.
14. A system for identifying and quantifying factors related to an improvement in the performance of a specific entity or type of entity, the system being arranged to process raw performance data regarding the entity and comprising:

   Means for establishing a multi-tier hierarchically graded data pyramid of the raw performance data customized to the entity and to a technical classification of that entity, wherein the performance of the entity can be categorised by the hierarchical grade of the data pyramid;

   Means for identifying specific instances in the raw performance data where there has been a conversion from a first tier of the data pyramid to a second higher tier of the pyramid; and

   Means for applying an image/equity analytical modeling technique to determine the factors that are responsible for the improvement in the performance grade of the particular instance of the entity from the first to the second tier of the pyramid.

15. A system for predicting an impact of changing a user-controllable variable of a complex entity on the performance of that entity, the system comprising:

   Means for receiving performance information identifying key factors which have a significant on the performance of the entity, and

   Means for performing a regression analysis on the received performance information and a plurality of predetermined values of the user-controllable variable; and

   Means for determining from the results of the regression analysis an association between the performance of the entity and the value of the performance information such that the impact of changing the value of the variable can be determined.

16. A method for quantifying brand development opportunities, comprising:

   executing a first analysis;

   executing a second analysis; and
linking results of the first analysis and results of the second analysis through regression analysis, for uncovering insights that would not be apparent based on either the first or second analysis individually;

wherein the first and second analyses are chosen from the group comprising: image/equity analysis, customized brand pyramid analysis, trade-off analysis, probability analysis, econometric analysis, behavioral analysis, and brand pyramid conversion analysis.

17. The method from claim 16, wherein the first analysis chosen is brand pyramid conversion analysis and the second analysis is image/equity analysis; and

wherein the linking step results in an understanding of drivers behind why customers move from one tier of the brand pyramid to a second tier, for determining how to increase attitudinal and behavioral loyalty.

18. The method from claim 16, further comprising:

executing a third analysis;

wherein the first analysis chosen is brand pyramid conversion analysis, the second analysis is image/equity analysis and the third analysis is trade-off analysis;

wherein the linking step results in an understanding of trade-offs between factors causing a group of customers to move from one tier of the brand pyramid to a second tier.

19. The method from claim 16, further comprising:

executing a third analysis;

wherein the first analysis chosen is brand pyramid conversion analysis, the second analysis is econometric analysis and the third analysis is image/equity analysis;
wherein the linking step results in an understanding of the relative weighting of drivers causing a group of customers to move from one tier of the brand pyramid to a second tier.

20. The method from claim 16, further comprising:
   executing a third analysis;
   wherein the first analysis chosen is brand pyramid conversion analysis, the second analysis chosen is image/equity analysis and the third analysis chosen is probability analysis;
   wherein the linking step results in an understanding of an estimate of the value based on a range of probabilities that a group of customers will move from one tier of the brand pyramid to a second tier.

21. The method from any one of claims 17 through 20, wherein the brand pyramid conversion analysis is performed on a multi-tier brand pyramid customized to a company and to an industry of the company.

22. A method for calculating cost/benefit comprising:
   identifying a multi-tier brand pyramid customized to a company and to an industry of the company;
   identifying conversion rates for the tiers in the multi-tier brand pyramid customized to the company and to an industry of the company;
   performing image/equity analysis to determine a set of drivers behind why customers move from one tier of the brand pyramid to a second tier; and
   performing probability analysis on the set of drivers for determining a level of certainty that affecting a chosen driver will cause movement through the brand pyramid, for the purpose of quantifying a benefit of changing the chosen driver.
23. The method from claim 22, further comprising the step of calculating a return on investment from the results.

24. A method for quantifying brand development opportunities for a particular brand, comprising:
   identifying a multi-tier brand pyramid customized to the company and to an industry of the company;
   identifying customers who have converted from a first tier to a second tier of the brand pyramid; and
   applying image/equity driver analysis for understanding drivers behind why customers move from a first tier of the brand pyramid to a second tier.

25. The method from claim 24, further comprising:
   performing tradeoff analysis for evaluating trade-offs of customer needs causing a group of customers to move from a first tier of the brand pyramid to a second tier.

26. The method from claim 24, further comprising:
   performing econometric analysis to determine the relative weighting associated with the needs causing a group of customers to move from a first tier of the brand pyramid to the second tier over time.

27. The method from claim 24, further comprising:
   performing regression analysis on customer needs and customer perceptions for understanding which perceptions drive needs.

28. The method from claim 24, further comprising:
performing probability analysis to determine an estimate of value based on a range of probabilities of the customer needs causing a group of customers to move from a first tier of the brand pyramid to a second tier.

29. The method from claim 24, further comprising:

performing probability analysis to determine an estimate of value based on a range of probabilities of image attributes driving conversion to the second tier.

30. A method for predicting an impact on pricing power, comprising:

providing image driver data; and

performing regression analysis on the image driver data and a series of price increments; and

determining from the regression analysis an association between brand drivers and price increments.

31. The method from claim 30 wherein data for price increments is from survey data.

32. The method from claim 30 wherein the data for price increments is from trade-off analysis.

33. A method for developing a specialized brand pyramid that reflects attitudinal drivers, comprising:

hypothesizing a plurality of ordered tiers for a brand pyramid, wherein the plurality of tiers are based on a particular brand and an industry for the brand, and wherein each of the tiers is associated with a corresponding membership definition;

applying data to generate membership data for each of the tiers;
associating the plurality of tiers into a draft of a customized brand pyramid;
refining or reordering the tiers based on deficiencies of the draft pyramid; and
repeating the steps of applying, associating and refining or reordering until the brand
pyramid passes a test of acceptability.

34. A method for clustering a plurality of brand pyramids into a plurality of archetype
groups, comprising:
hypothesizing definitions for each of the plurality of archetype groups;
assigning each of the brand pyramids to one of the archetype groups on the
basis of observation or statistical analysis;
refining the definitions for each of the archetype groups; and
repeating the steps of assigning and refining until the plurality of archetype
groups pass a test of acceptability.

35. The method from claim 34, wherein the plurality of archetype groups are based
on product, geography and segment.

36. The method from claim 34, wherein the brand pyramids are conversion pyramids.

37. The method from claim 34, further comprising:
performing image/equity driver analysis on each of the archetype groups for
generating insight about preferred marketing techniques for brand pyramids members
of the archetype groups.

38. The method from claim 34, further comprising:
defining a marketing plan for each of the archetype groups.
39. The method from claim 34, wherein the statistical analysis is cluster analysis.

40. The method from claim 34, wherein the statistical analysis is factor analysis.

41. The method from claim 34, wherein the statistical analysis is decision tree analysis.
Image Perceptual Map

Figure 4
Figure 5
Image Perceptual Map

Global Leader

Brand D

Brand C

Brand B

Presence

Hipness

Quality

Profile

Global

Easy to Use

Fashionable

Relationship

Premium Brand

Functional

Everyday Life

Flashy

Client

Brand X

Service Ease

Premium Brand
<table>
<thead>
<tr>
<th>Tier</th>
<th>Conversion per Tier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavirally Loyal</td>
<td>73.5%</td>
</tr>
<tr>
<td>Recommend</td>
<td>96.1%</td>
</tr>
<tr>
<td>Intend to Purchase</td>
<td>48.3%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>31.5%</td>
</tr>
<tr>
<td>Buy</td>
<td>98.2%</td>
</tr>
<tr>
<td>Use</td>
<td>73.5%</td>
</tr>
<tr>
<td>High Opinion</td>
<td>76.8%</td>
</tr>
<tr>
<td>Familiar</td>
<td>96.5%</td>
</tr>
<tr>
<td>Aware</td>
<td>96.2%</td>
</tr>
</tbody>
</table>

Figure 7
Figure 8