

Qualitative / Quantitative Data Integration

Jill Donahue, Nestle Purina Petcare

Michael Lieberman, Multivariate Solutions



Why are we here?

- End User is not truly the “end”
 - Corporate Researcher
- Research is more than value-added
- Understanding how and why decisions are made

What we are going to learn...

- Why data integration is important
- What types of data is usually included in data integration
- Who is looking for data integrated solutions
- How decisions are made based on different sources of data

Why data integration is important

- Decisions are not made in a vacuum
- Things change:
 - Marketplace/Economy
 - Cost to make the product/produce the service
 - Technology
 - Benefits of the product/service

Types of data usually included in data integration

- Category Insights
- Marketplace/Retail Insights
- R&D/Technology Information
- Consumer Insights
- Segmentations

And of course...Executive Team Pet Projects!!

Who is looking for data integrated solutions?

- The short answer...Everyone!

What is the goal of your research project?

- Understanding the consumer
- Evaluating a concept or brand positioning
- Testing a new product
- Determining product viability
- Understanding purchase behavior
- Updating current and past research methodologies
 - Tracking studies
 - Brand equity

Traditional Views of Research Methods

Method	Qualitative	Quantitative
Perspective	Exploratory	Confirmatory
Relationship	Objectivity/reduction of product focus	Use of product focus as a tool for understanding
Tools	Focus groups, in-depth interviews, observation (ethnography), social networks, guided on-line chats (IModerate)	Surveys, tabulations, multivariate analysis, graphical reporting
Analytical Aims	Themes	Numerical Descriptions
Primary Research Consumer	Creative	Communications or Key Drivers

Design Components

Method	Qualitative	Quantitative
Data Collection	Inductive development of strategies to product characteristics Collection of textual/visual/oral material	Prior development of brand measurements Quantitative and testing multivariate testing
Data Analysis	Textual analysis (memos, coding, quotations) Narrative approaches	Numerical descriptive Estimation of population variables Conversion of textual findings into attribute arrays

Integrated Data Terminology

- Multimethod Research
- Mixed Method Designs

Integrated Data – Terminology

- Multimethod Research
 - Research is collected by two or more procedures (e.g. ethnography and case study), quantitative study interspersed with on-line chat to give data depth
- Mixed Method Designs
 - Use qualitative AND quantitative data collection/analysis techniques
 - In parallel, but generally sequential phases
 - Focus groups
 - Standardized surveys
 - Mixing occurs in the Methods section

Integrated Data – and Utility

- Simultaneously accomplish two goals
 - Demonstrate that an array of variables will predict an outcome
 - Answer exploratory questions about how that predicted relationship actually happens
- Qualitative phase
 - Create hypothesis of key drivers of consumer behavior
- Quantitative phase
 - Test hypothesis
 - Develop key drivers to consumer behavior
 - Establish brand equity
 - Develop a communication strategy for brand in general or by key segments



Fundamental Principles

- Methods should be mixed in a way that has complementary strengths
 - Non-overlapping weakness
 - A clear and actionable 'answer' emerges
- Mixed methods:
 - Focus groups
 - Follow-up phone surveys
- Strengths of the Integrated approach
 - Provide stronger inferences
 - Opportunity to present a greater diversity of viewpoints

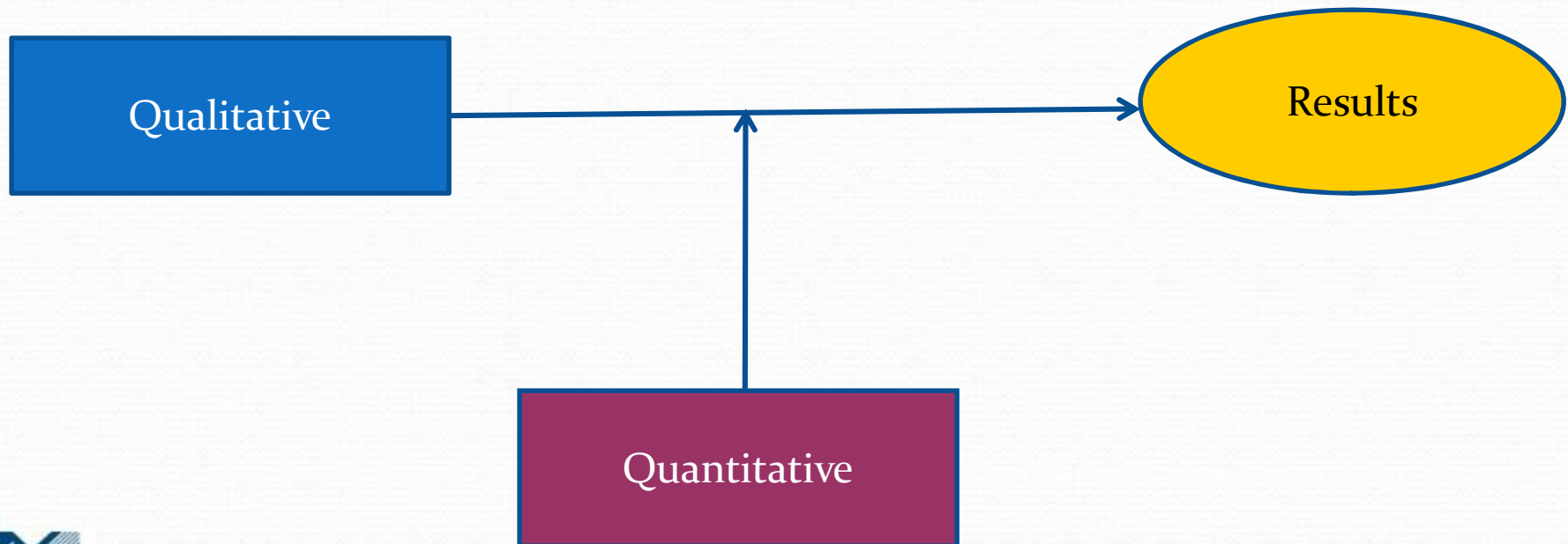
Model 1 – Most common

- Qualitative methods used to develop quantitative design



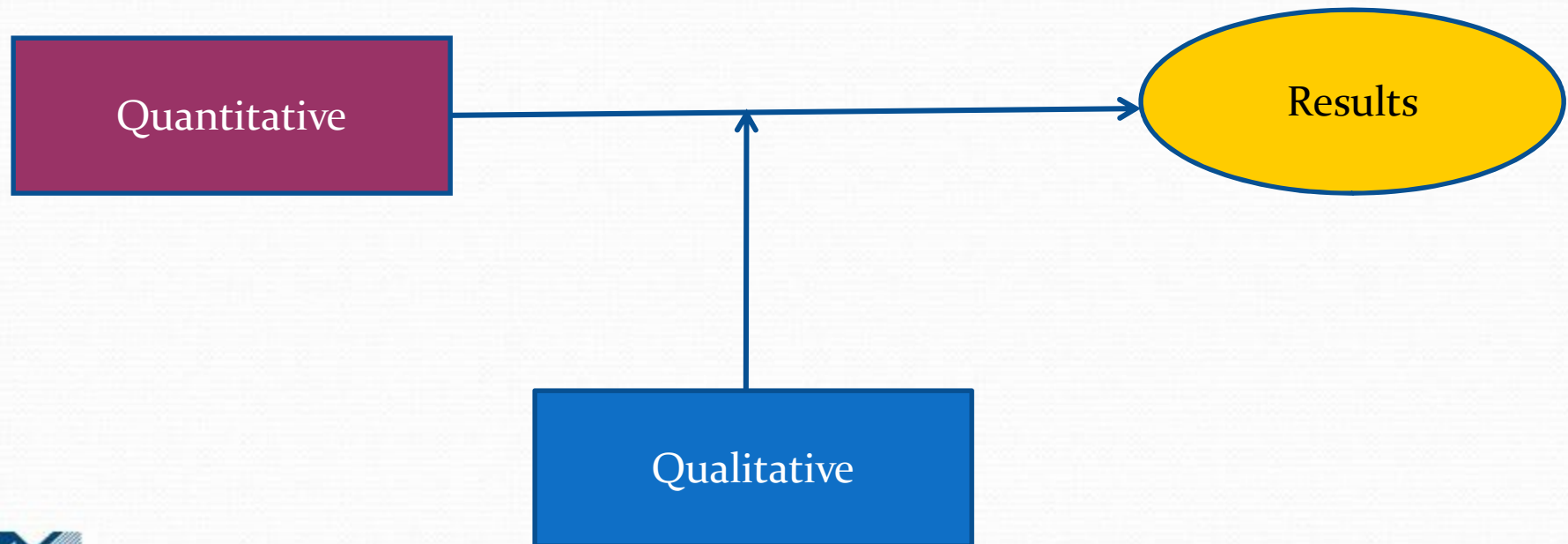
Model 2 – Most common

- Quantitative methods used to embellish a primarily qualitative study



Model 3

- Qualitative methods used to explain a quantitative finding



Model 4

- Qualitative and quantitative used equally and in parallel



Case Study 1

Breakfast Meals “On-the-Go”
Goal: Increase Work-Week Breakfast
Acceptance Among Families



Key Facts – Breakfast

92% of Americans agree that breakfast is the most important meal of the day

46% of Americans eat breakfast every day

Reasons they know they should eat breakfast:

Increase physical energy 74%

Increase mental focus 59%

Maintain a healthy body weight 54%



54% say they do not have time to eat breakfast
24% say it is not convenient



Qualitative Aspect – Focus Groups

- Group discussion
- 6 to 12 individuals with facilitator
- Four types of breakfast eaters
 - Drinks only (coffee, tea, juice, etc.)
 - Health bars (granola bars, meal replacement, etc.)
 - Home eaters
 - Restaurant eaters
- Discussion plan with pre-determined set of open end queries
- Recorded (audio, video)
- Average duration of 2 hours

Qualitative Aspect – Focus Groups

- The Challenge
 - Breakfast, Inc. has a list of more than fifty nutrition and taste attributes that apply to their marketing strategy
 - Through a two-step, qual/quant project they hope to develop an effective communications strategy that communicates a positive brand equity in no more than a handful of messages

Quantitative Aspect – Focus Groups

- Key Quotes

“I need a convenient way to eat breakfast. Realistically, something I can eat in my car..”

“Provides the highest quality ingredients, and is a better value than others..”

“I know breakfast is the most important meal of the day, but who has time?”

“My goal is to get my kids fed in the morning, and I’m lucky if I can get that accomplished.”

“I know I should be eating something in the morning that is better for me than a muffin!”

“I am a coffee-only person; if there was a way to have breakfast that was as easy as a cup of coffee, I would have it made.”

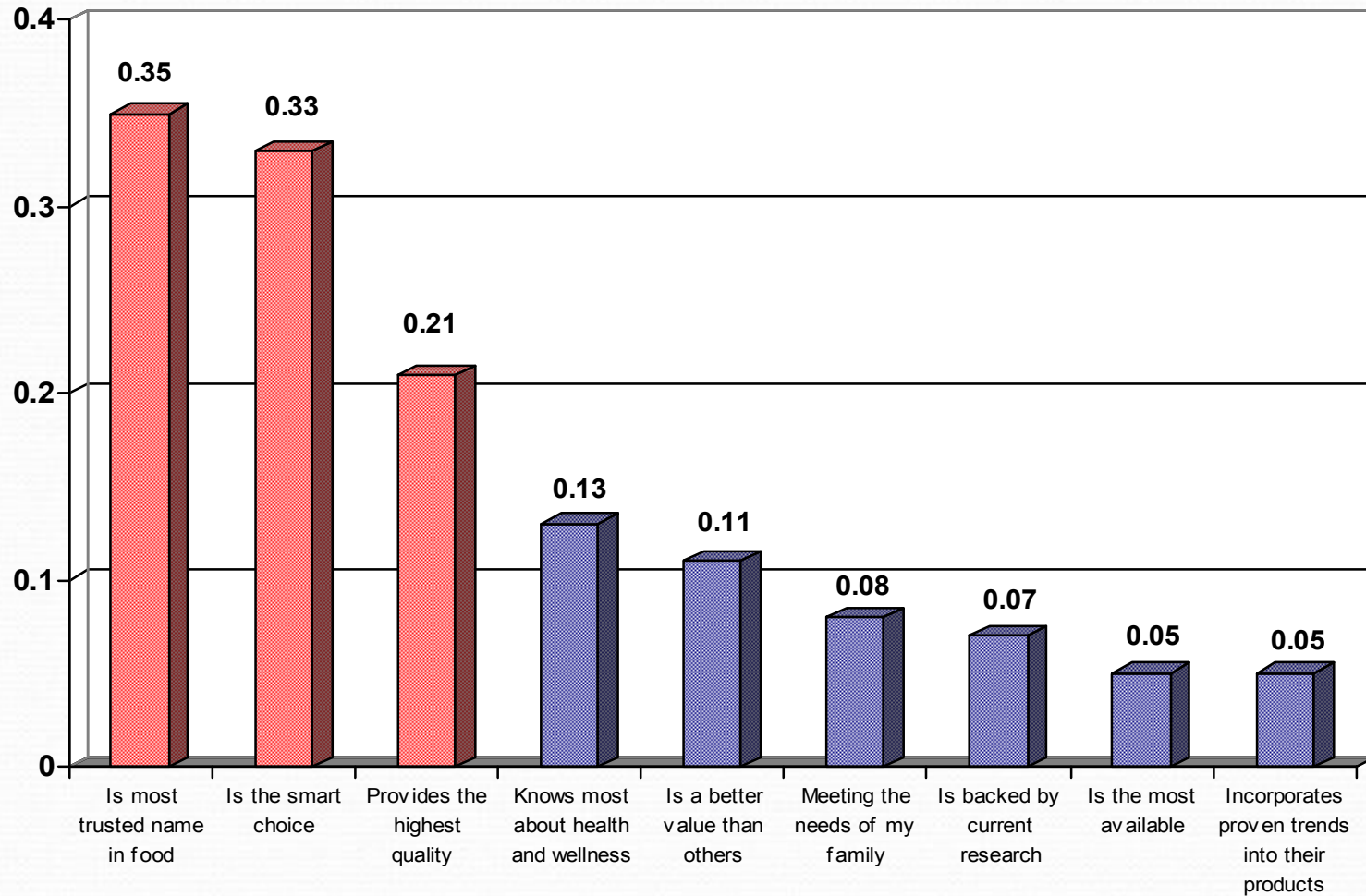
Qualitative Aspect – Attribute Array

- Attribute Array
 - Is most trusted name in food
 - Is the smart choice for me and my family
 - Provides the highest quality
 - Knows most about the latest in health and wellness
 - Is a better value than others
 - Understands the importance of me meeting the needs of my family
 - Is backed by current research
 - Is the most available
 - Incorporates the latest proven trends into their products



Breakfast Foods

Dependent Variable: Concept Purchase Intent



Regression Analysis

Case Study 2

Olive Oil

Goal: Product Maximization



Key Facts – Olive Oil

U.S. olive oil sales are on track to hit \$1.3 billion by 2010, according to recent market research



USA TODAY - TUESDAY, NOVEMBER 2, 2004 - 7D

FDA says olive oil is heart-healthy

Monounsaturated fat's benefits can be listed on labels

By Debra Henderson
The Associated Press

WASHINGTON — Foods containing olive oil can carry labels saying they might reduce the risk of coronary heart disease, the government says, citing limited evidence from a dozen scientific studies about the benefits of monounsaturated fats.

As long as people don't increase the number of calories they consume daily, the Food and Drug Administration confirmed a reduction in the risk of coronary heart disease when people replace foods high in saturated fat with the monounsaturated fat in olive oil.

That means a change as simple as sautéing food in two tablespoons of olive oil instead of butter might be healthier for your best.

Because coronary heart disease is the No. 1 killer of both men and women in the United States, it is a public health priority to make sure consumers have accurate and useful information on reducing their risk, Letter Crowfoot, acting FDA

tion, which sought the qualified health claim in August 2003. "Olive oil is a healthy product to help them fight heart disease," Crowfoot has underscored the heart benefits from so-called Mediterranean diets high in unsaturated fats from vegetable oil, nuts and such fish as salmon and tuna. Mortality rates dropped by more than 50% among elderly Europeans who stuck to such diets and led healthy lifestyles, says a study in the September issue of the *Journal of the American Medical Association*.

The North American Olive Oil Association included 18 publications to back its claim for the benefits of olive oil. The group wanted to make the claim for monounsaturated fats contained in just one tablespoon of olive oil a day. Olive oil and certain foods containing olive oil can now indicate that "limited and not conclusive scientific evidence suggests that eating about two tablespoons (23 grams) of olive oil daily may reduce the risk of coronary heart disease due to the mono-

Two tablespoons a day. Studies have singled out the cardiovascular benefits of the "good" monounsaturated fat in olive oil.

commissioner said in a statement, "It's good news for consumers,"

Olive Oil Can Tout Heart Benefit

By NICHOLAS ZAMISKA

Olive oil and foods containing olive oil will be able to tout on their labels that they reduce the risk of coronary heart disease, the Food and Drug Administration said.

Yesterday's FDA announcement highlights a belief that the olive-oil industry has embraced for years.

The FDA said there is evidence that people can lower their risk of coronary heart disease by substituting foods that are high in saturated fat with the monounsaturated fat in olive oil, as long as they don't increase their caloric intake.

Bottles of olive oil will be allowed to carry labels that read: "Limited and not conclusive scientific evidence suggests that eating about 2 tablespoons (23 grams) of olive oil daily may reduce the risk of coronary heart disease due to the monounsaturated fat in olive oil."

A spokeswoman for Unilever, the Anglo-Dutch consumer-goods giant that makes Bertolli, a popular brand of olive

oil sold in the U.S., said the company expects sales to increase as a result of the new labeling.

In the past year, sales of olive oil totaled more than \$540 million, a 16% increase over the previous year, according to ACNielsen, the market-research firm.

The FDA began approving so-called qualified health claims for foods last year, paving the way for government-sanctioned health claims on nuts, omega-3 fatty acids in fish and now olive oil. Such claims, which have proved somewhat controversial among consumer groups given the lower standard, are allowed when the scientific evidence generally is supportive, but not yet conclusive.

Olive-oil imports, primarily from Mediterranean countries, have been growing steadily over the years, rising from 64 million pounds in 1982 to 473 million pounds in 2003, according to the North American Olive Oil Association, the industry group that spent more than three years and around \$200,000 to petition the FDA to approve the health claim.



In the central U.S., household penetration has increased nearly 2 percentage points in 2007, from 31.9% to 33.6%



Source: North American Olive Oil Association

Qualitative Aspect – Discussion Groups

- Group discussion invited by newspaper advertisement to discuss use and aspects of olive oil
- 40-50 individuals with facilitator
- Individuals break into groups according to their olive oil usage
 - General Population
 - Olive Oil Users
- No pre-determined discussion plan
- Average duration of 2 hours

Qualitative Aspect – Discussion Groups

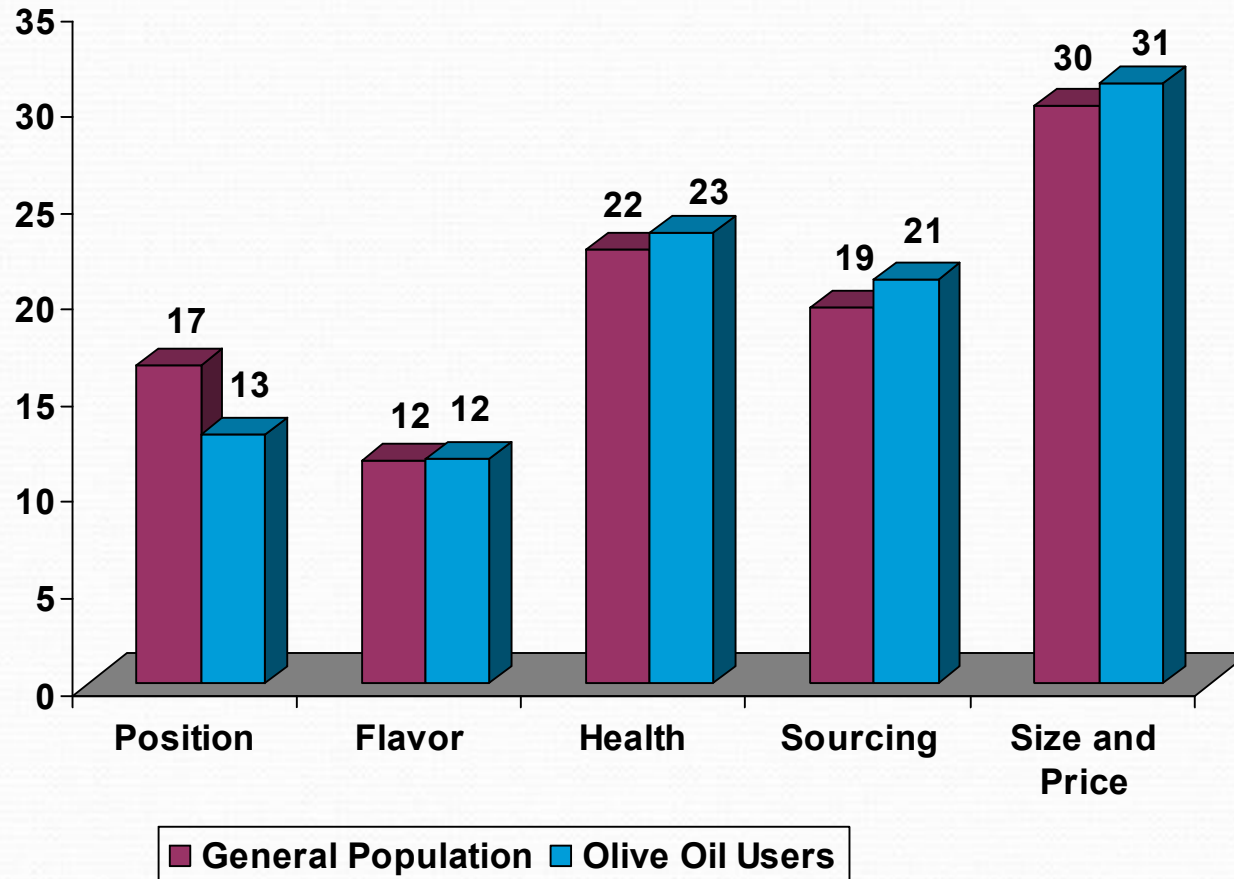
- The Challenge
 - To narrow down aspects of olive oil purchase in order to test the maximum ‘mix’ of purchase components
 - Relative importance of treatment attributes for each specialty
 - Individual feature preferences
 - Simulation models of purchase intent

Quantitative Aspect – Conjoint Analysis

- Conjoint Analysis – Five Oil Aspects
 - Position
 - Flavor
 - Health
 - Sourcing
 - Size and Price

- Conjoint Analysis can be used to understand market strategy development, new product design, market share, profitability, or margin optimization, and customer retention and profitability.
- With conjoint analysis, the changes in the product or market can be incorporated into the simulation model to generate predictions of how buyers will respond to “what if” scenarios.

Average Importance of Attributes



Conjoint Analysis shows that 'Size and Price' drive consumer purchase the most, roughly three times more than 'Flavor' in the olive oil market.



Case Study 3

Jack's Barbecue – Regional Restaurant Chain
**Goal: Kano Satisfaction Model with Deeper
Consumer Understanding**



Key Facts – Steakhouse

Jack's Steakhouse is a casual dining restaurant based in Georgia featuring barbecue and steakhouse cuisine, one of several chains owned by Colossal Restaurants



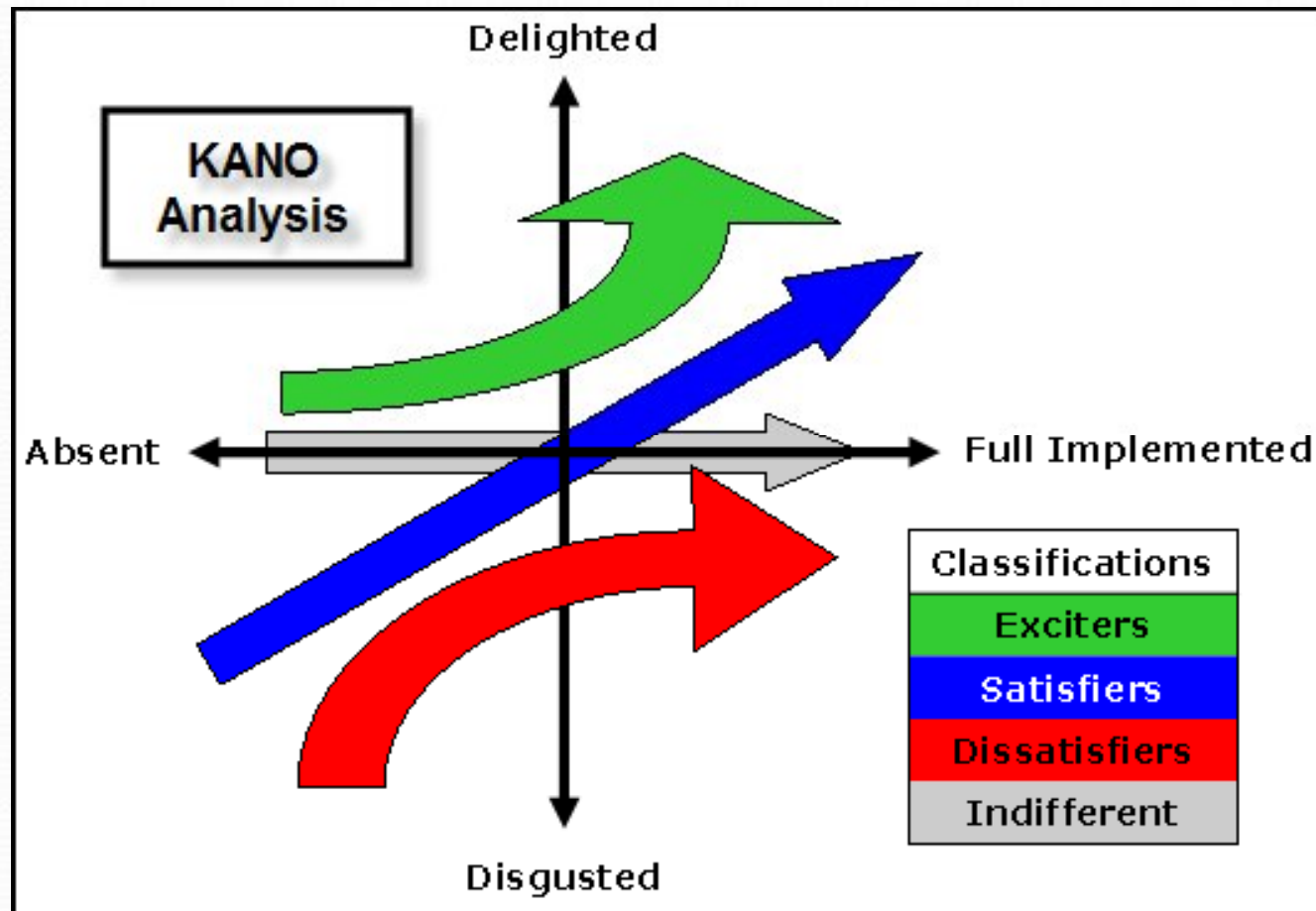
With projected sales of \$79 million this year, Jack's has plans to grow to two dozen locally owned restaurants by early next year



Quantitative Aspect – Kano Analysis

- Jack's Steakhouse conducted a customer satisfaction survey in order to quantify customer loyalty and ascertain their market position vis-à-vis the increasingly competitive casual dining segment.
- Kano Analysis is, in essence, a measure of importance of the features to the customer and performance of the business.
- For Jack's Steakhouse, we are looking to establish Kano points that drive satisfaction, but also distinguish the brand.

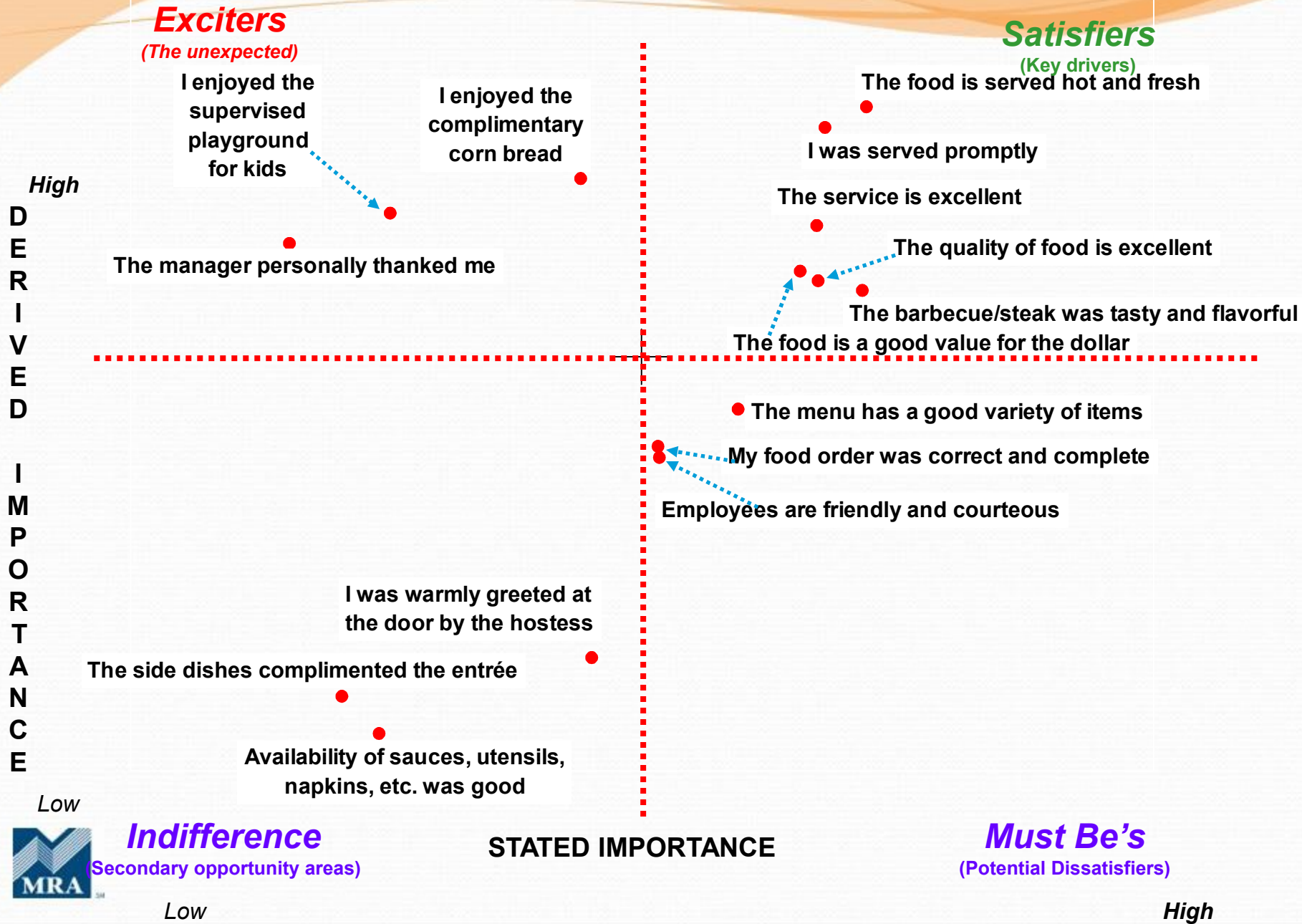
Kano Analysis



Quantitative Aspect – Kano Analysis

I was served promptly	75	0.49
The food is a good value for the dollar	75	0.41
The service is excellent	74	0.44
The quality of food is excellent	73	0.42
The menu has a good variety of items	69	0.34
Employees are friendly and courteous	65	0.32
My food order was correct and complete	64	0.32
I was warmly greeted at the door by the hostess	60	0.21
I enjoyed the complimentary corn bread	60	0.47
I enjoyed the supervised Steakhouse playground for kids	48	0.45
Availability of sauces, utensils, napkins, etc. was good	47	0.43
The side dishes complemented the entrée	45	0.41
The manager personally thanked me	41	0.43

Quantitative Aspect – Kano Analysis



Qualitative Aspect – On-Line Chat

- Follow-up Survey with on-line chats for deeper learning of Kano *Exciters*
 - Respondent indicates ‘Enjoyed complimentary corn bread’
 - “I like to lap up the rib juice with cornbread at the end of the meal.”
 - “All I can eat cornbread. Can’t beat that.”
 - Respondent indicates ‘Enjoyed supervised playground for kids’
 - “Makes the restaurant fun for the kids too.”
 - “Put the kids in the playground. When the food comes, bring ‘em back, feed ‘em, then put them back in the playground so we can enjoy our food.”
 - “Kids don’t have fun, no one has fun.”
 - Respondent indicates ‘Manager personally thanked me.’
 - “Makes me feel special.”
 - “I know Pete since high school, and I know he appreciates my business.”



How decisions are made based on different sources of data

- We will be dividing into teams
- Different data sources will be made available to each team
- Each team should reach a conclusion based on the information they receive