CANBACK DANGEL MANAGEMENT CONSULTING: FOOD CASE EXAMPLE

February 2007

PREDICTIVE
ANALYTICS
INTEGRATORS

CANBACK DANGEL
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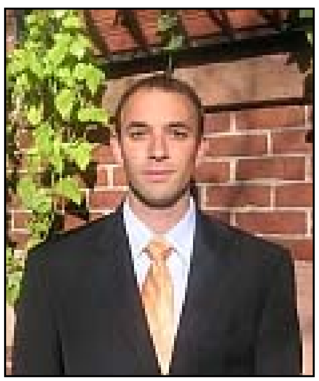
Introduction to Canback Dangel

Brazil energy drinks case example

Canback Dangel was founded in 2004 with the goal of applying predictive insights techniques to management problems

SENIOR LEADERSHIP

Dr Staffan Canback
Boston



Frank D'Agnese
Boston

Founded in 2004 by Dr Staffan Canback and Justin Dangel to bring newly developed, scientific approaches to management practice

Serves leading consumer-facing companies in consumer goods, retail, financial services and telecom sectors with a focus on opportunities in emerging countries

Uses predictive analytics to help clients draw reliable, fact-based conclusions about the future based on sophisticated analyses of internal and external data

Uniqueness based on integrative consulting capabilities, empirically derived market and consumer models, proprietary databases and global presence

Speaks the language of senior management

CREDO

Managerially Relevant—Analytically Robust

BELIEF

Within 20 years, all important executive decisions in large corporations will be supported by predictive analytics

MISSION

To see patterns where others see chaos

GOAL

To be <u>really useful</u>

Canback Dangel works mainly in four consumer-facing sectors where we have distinct competitive advantages based on methods and experience

CONSUMER GOODS	**Capturing exciting but hard to understand opportunities for durable and non-durable goods**, such as assessing new product potential in Asia and developing market entry strategy in Latin America
RETAIL	**Predicting trends in retail to inform strategic decisions**, for example choosing store locations in Western Europe and forecasting the evolution of modern trade in the Philippines
FINANCIAL SERVICES	**Optimizing credit card, retail banking and consumer finance operations**, including creating a pricing strategy for credit cards in Europe and defining optimal mix of ATM and retail branches for bank in sub-Saharan Africa
CELLULAR SERVICES	**Assessing future demand in global markets**, such as predicting new subscriber growth in Central America and analyzing profitability prospects for a third market entrant in China

Canback Dangel works on management consulting and market research projects around the world, while database management is centralized in Boston

OFFERINGS

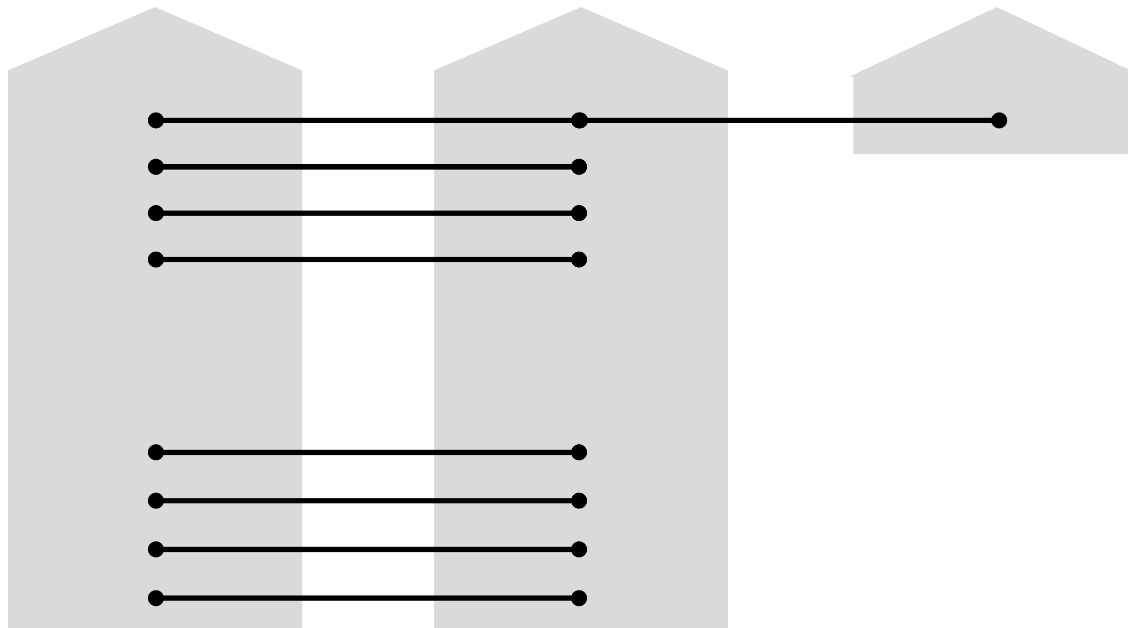
Management consulting | Market research | Global databases

AMERICAS & EUROPE

Boston (lead)
Mexico City
Moscow
São Paulo

ASIA

Singapore (lead)
Beijing
Manila
Pune (India)



Market research affiliates

Markwald, La Madrid y Asociados, Argentina
Quali Research, Brazil
Mainland Marketing Research Company, China
ValueNotes, India
Berumen y Asociados, Mexico
Inspira Research Consulting, The Philippines

Since its start in 2004, Canback Dangel has completed more than 30 projects for consumer-facing companies

Company description	Product description	Geography	Project
US food company	Food	Brazil, China, Mexico, Philippines	Create business plan for new type of functional food with revolutionary health benefits
US food company	Food	India	Assess future market in category and 11 sub-categories
US household and personal products company	Personal care products	Russia	Market sizing and demand predicting
US household and personal products company	Personal care products	Russia	Regional pricing analysis for premium brands
US household and personal products company	Personal care products	Global	Market sizing and short-term forecasting for resource allocation
US food company	Food	Argentina	Category attractiveness assessment and brand positioning
US household and personal products company	Personal care products	Latin America	Market sizing and demand predictions
US household and personal products company	Personal care products	China	Market sizing and demand predictions
US food company	Food	Mexico	Category attractiveness assessment and brand positioning
US household and personal products company	Personal care products	China, India, Indonesia	Provincial pricing analysis to support tiered pricing strategy
US household and personal products company	Personal care products	US, UK, Germany, France, Japan	Analysis of interactions between low-end and premium products
German consumer products company	Household appliances	Russia	Market sizing and demand predictions for three product categories
US telecom company	Cellular services	China	Strategic evaluation of market prospects
US telecom company	Cellular services	China	Profitability analysis for third market entrant
US food company	Food	Brazil	Market sizing and demand predicting, category assessment and consumer profiling
US food company	Food	China	Predictive insights on market prospects, consumer preferences, and trade development
US food company	Food	Russia	Predictive insights on market prospects, consumer preferences, and trade development
International development agency	Banking	Sub-Sahara	Market sizing and forecasting with demand driver analysis
International development agency	Cellular services	Sub-Sahara	Market sizing and forecasting with demand driver analysis
US food company	Food	Brazil	Predictive insights on market prospects, consumer preferences, and trade development
US household and personal products company	Personal care products	Brazil, Russia, India, Indonesia, China	Assessment of modern retail trade trends
US food company	Food	Germany	Category attractiveness assessment
Chinese specialty retailer	Jewelry	China	Focus group interviews to support product mix optimization
Chinese food company	Snack foods	China	Survey exploring attitudes and preferences for local vs. international branded snacks
Chinese food company	Alcohol	China	Consumer surveys to profile segments

Introduction to Canback Dangel

Brazil energy drinks case example

Canback Dangel integrates insights from three knowledge domains into the Golder Tellis model to understand category and/or brand behavior

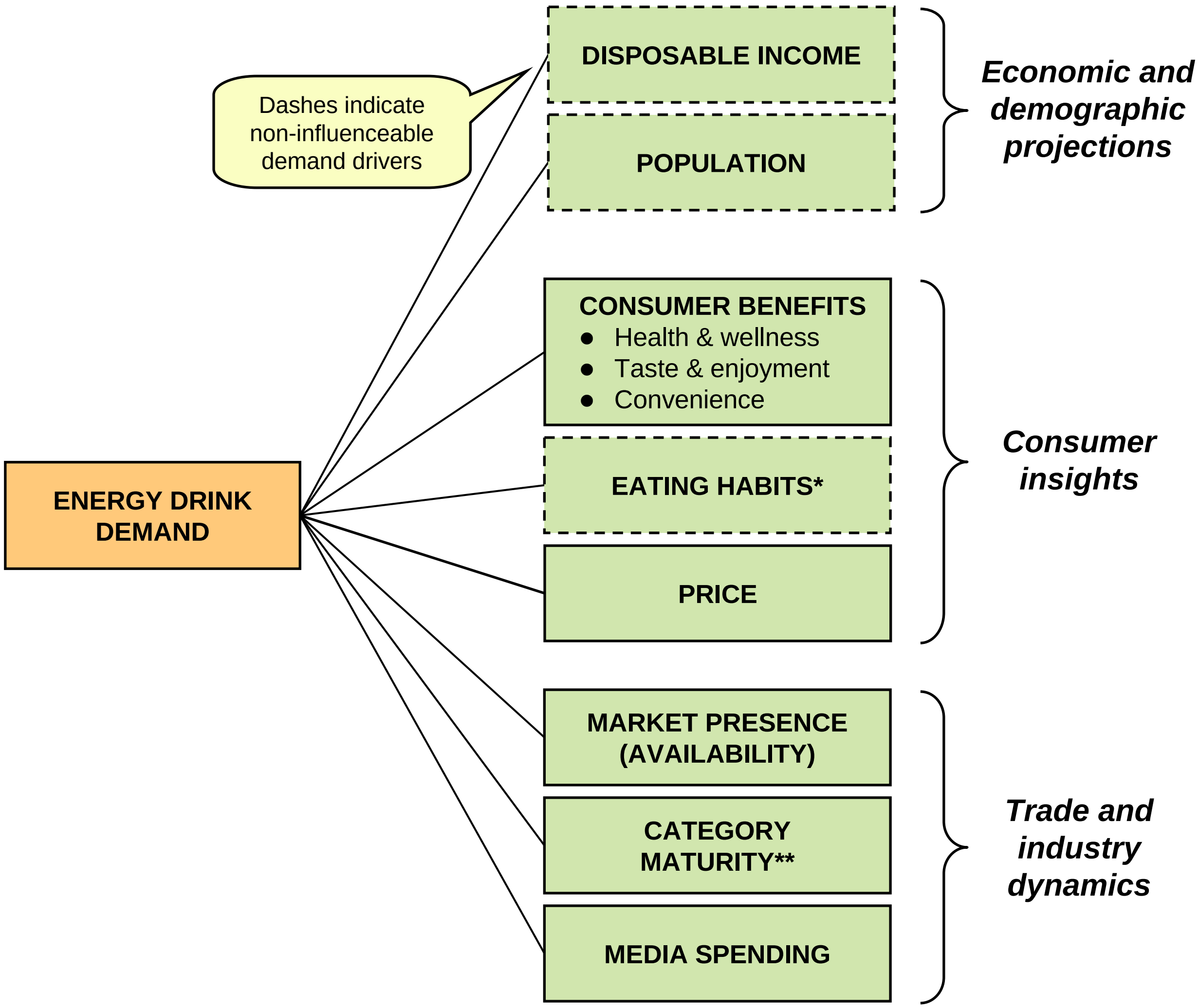
ECONOMIC & DEMOGRAPHIC PROJECTIONS	CONSUMER INSIGHTS (Furst)	INDUSTRY & TRADE DYNAMICS
How many people can afford the product?	Who is the consumer?	What is the nature of availability for the product?

GOLDER TELLIS PREDICTIVE MODEL

Category outlook
Brand outlook
Marketing levers

Our analysis found that 8 factors explain 88% of global energy drink demand and serve as the demand model for Brazil and other countries

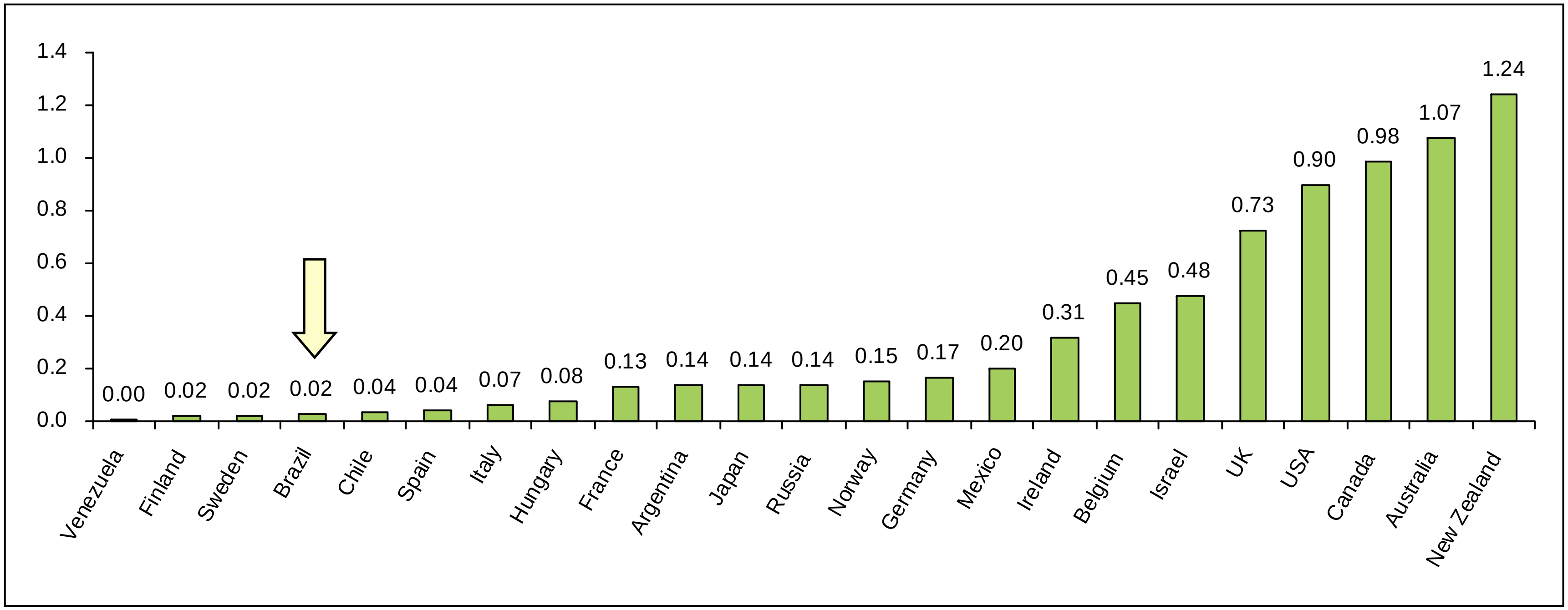
GOLDER TELLIS MODEL OF ENERGY DRINK DEMAND



Energy drink consumption varies considerably around the world

TOTAL ENERGY DRINK CONSUMPTION FOR SELECTED COUNTRIES

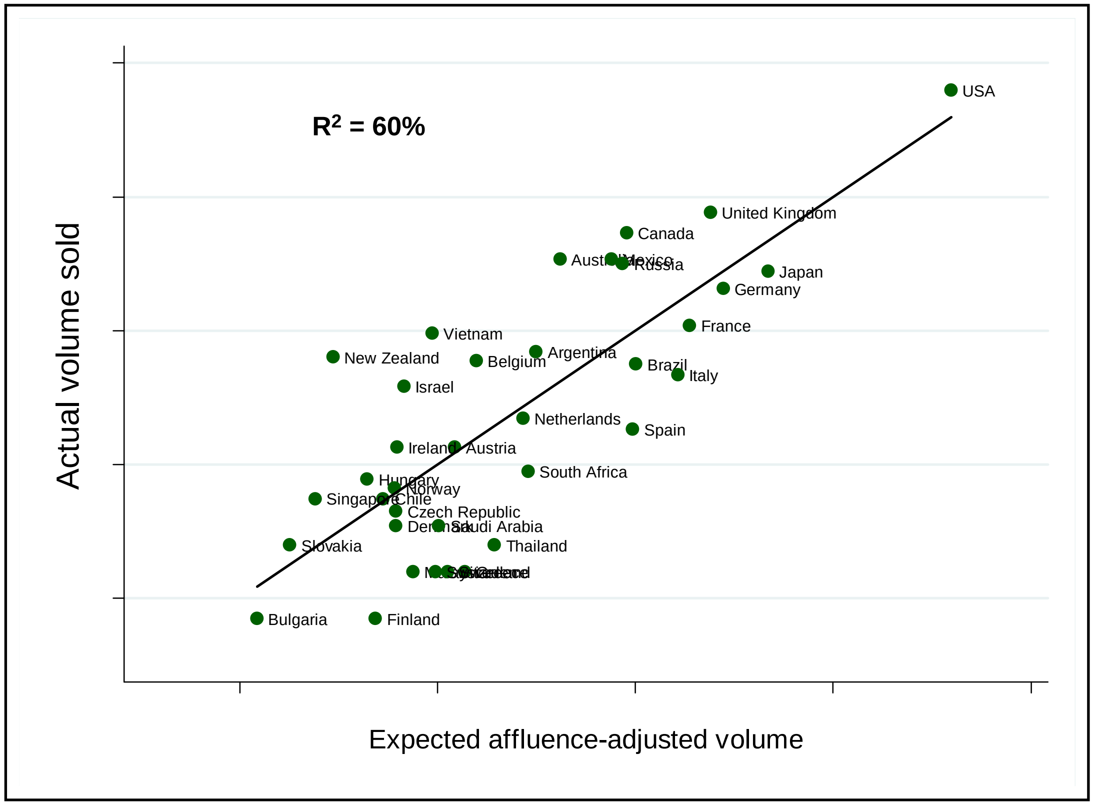
(Liters per capita)



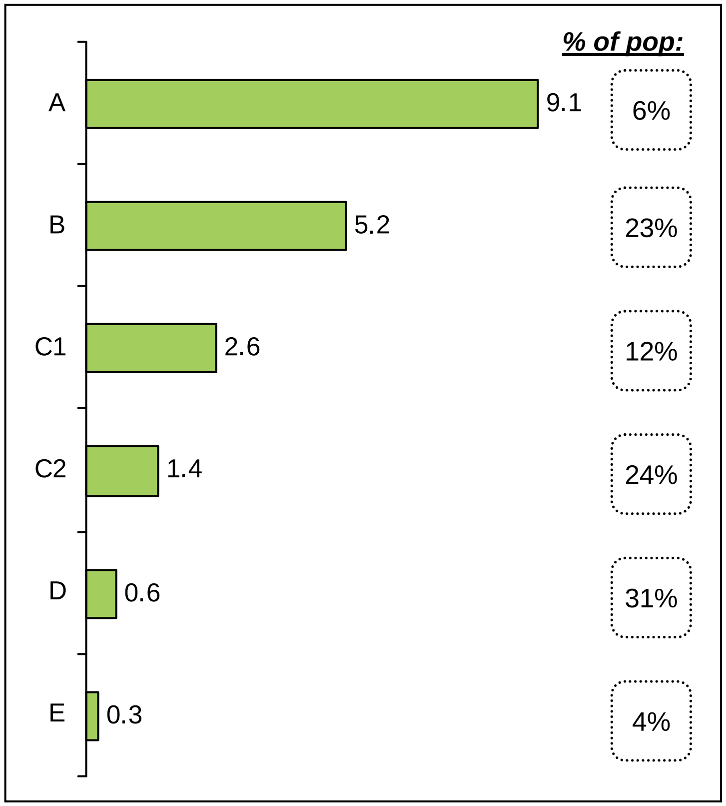
- Brazil has very low consumption, even compared to other Latin American countries, though the market has grown almost 10% per year for the last three years

Economic and demographics determine base demand

AFFLUENCE-ADJUSTED CATEGORY CONSUMPTION
(Log-log scale, standardized)

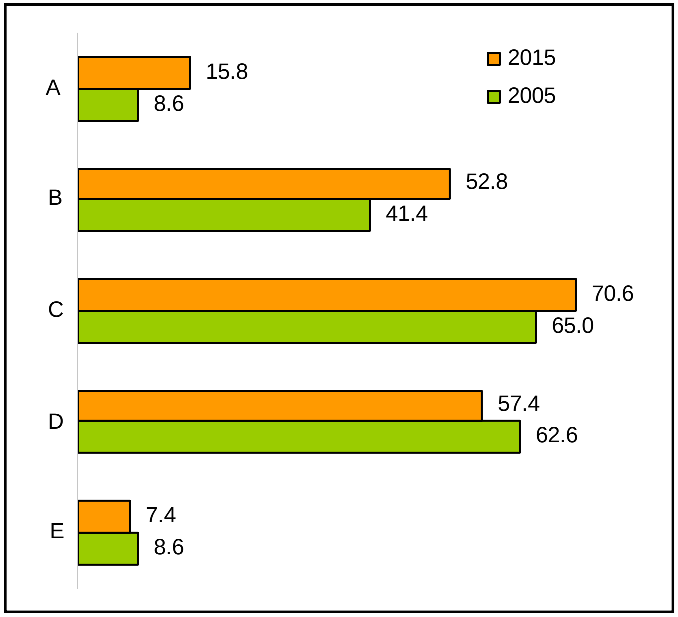


CATEGORY DEMAND BY SOCIO-ECONOMIC LEVEL
(Consumption per capita, Brazil)



Over 70% of the potential energy drink consumers in Brazil live in the South and Southeast, most of the rest is concentrated in large cities; this distribution will not change significantly over the next ten years

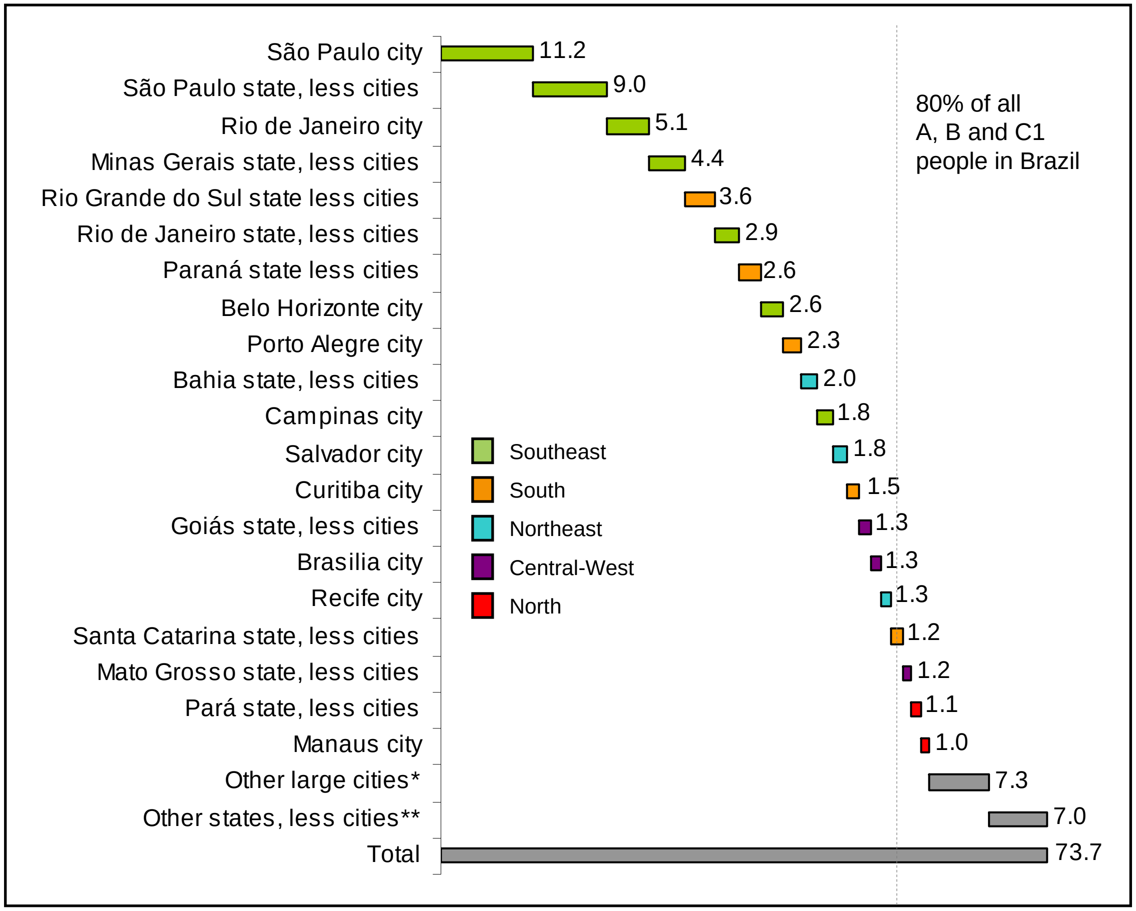
BRAZIL POPULATION BY SOCIOECONOMIC LEVEL
(Millions)



Total population: 2005: 186MM; 2015: 204MM

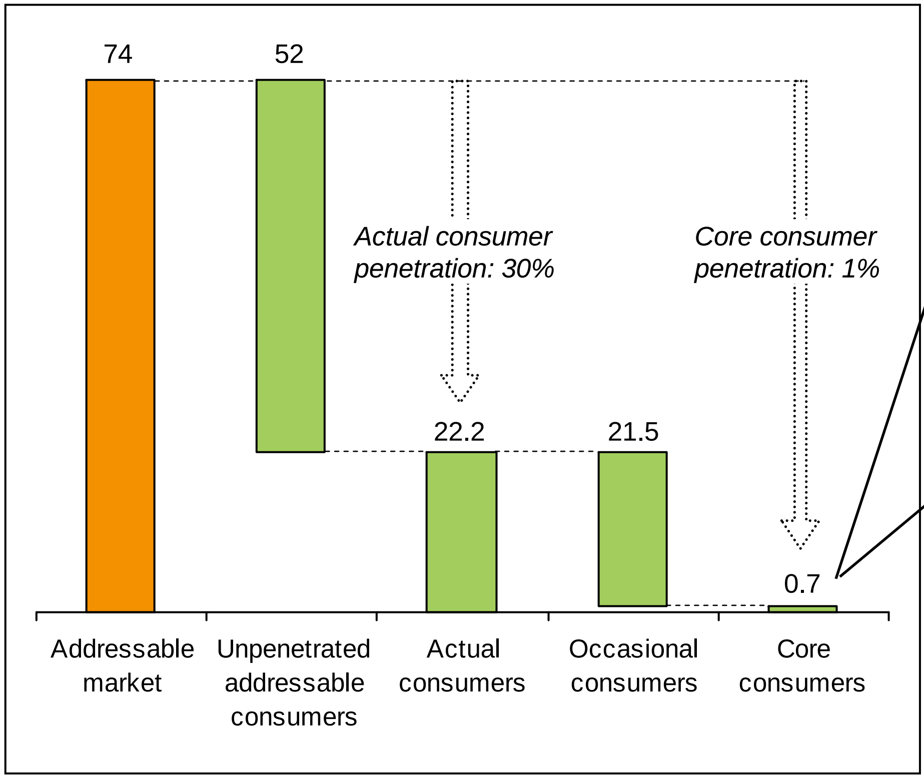
The number of people in the addressable market for energy drinks (A, B, C1 levels) can be expected to grow by 35% from 74MM today to 100MM by 2015 (3.1% CAGR)

TOTAL BRAZIL ABC1 POPULATION BY CITY OR STATE
(2005, millions)



The Brazilian market is small as measured by energy drink volume and number of core consumers; penetration of 'core' consumers is only 1%

ENERGY DRINK MARKET IN BRAZIL
(Millions of ABC1 consumers*)



PROFILE OF ENERGY DRINK CONSUMERS

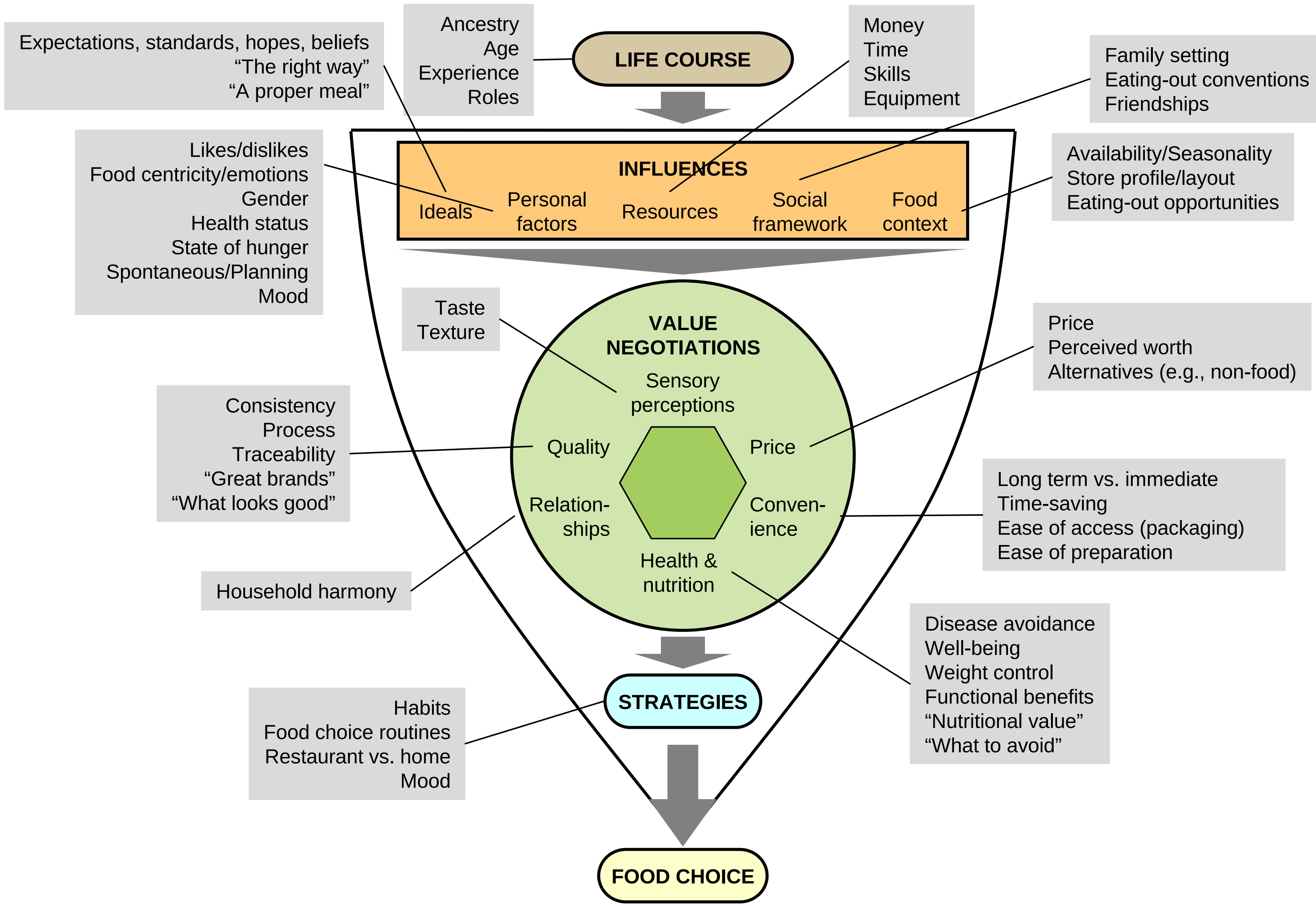
Consumption frequency	Volume (Liters MM)	% of total volume
Every day	1.2	27%
4 – 6 per week	0.5	11%
2 – 3 per week	0.7	16%
One per week	0.3	7%
2 – 3 per month	0.1	1%
One per month	0.0	~0%
Every 2 – 3 months	0.0	~0%
Occasionally	1.7	37%
Total	**4.5**	**100%**

'Occasional' consumers purchase energy drinks once every three months or less

"I saw it once on television. . . I don't recall seeing this product in a store"
- Luciano, mid 30's, C class, São Paulo

"I think it's a product for sportspeople, something sweet. I remember seeing it in supermarkets."
- Marcelo, 30, C class, São Paulo

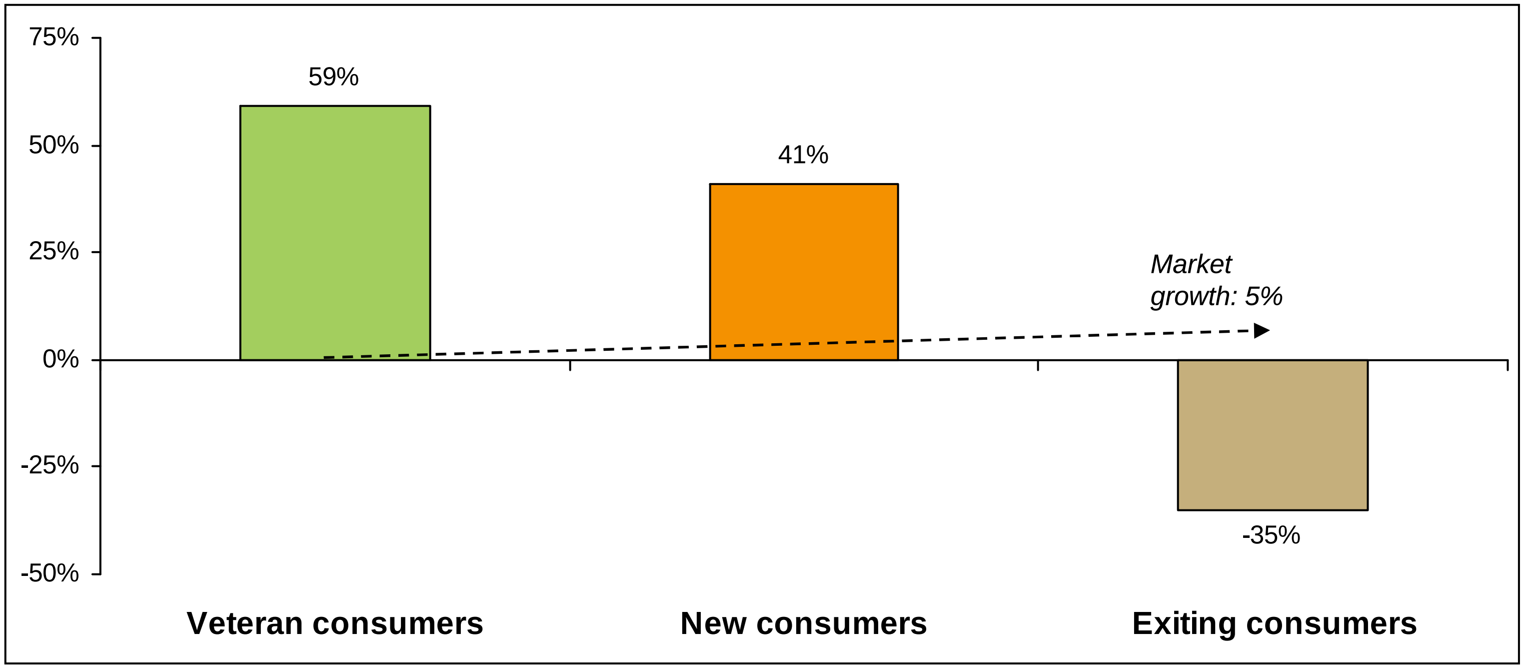
Furst's food choice framework allows for a mutually exclusive and completely exhaustive analysis of consumers and their choices



Source: Furst et al. (1996)

Dissatisfaction with taste leads to high churn of consumers (which in turn creates high consumer acquisition costs, leading to low profitability in the industry)

ANNUAL CHURN RATE OF ENERGY DRINK CONSUMERS



The reason that most consumers leave the category is dissatisfaction with taste

"I moved to yoghurt or to a fruit. Energy drinks are easy to get sick of the taste."
- Mariana, São Paulo

"After eating them for over a year, I got sick of it. Taste is too sweet."
- Soraia, São Paulo

Energy drink consumption in Brazil skews heavily to the morning

ENERGY DRINK CONSUMPTION OCCASIONS

Occasion	Frequency	Consumers	Volume
Breakfast	10.1	28%	53%
Mid-morning	5.2	23%	22%
Lunch	1.9	18%	6%
Mid-afternoon	3.3	19%	11%
Evening	3.1	13%	8%

"I drink them for breakfast or at noon and sometimes after eating lunch"
– Rafael, 31

"I have them after breakfast or lunch, but always as a dessert"
– Carlos, 85

"I don't have time to have breakfast. Energy drinks are nutritious and they help my body"
– Araceli, 19

With this background, it is possible to map out when and why Brazilians consume energy drinks and how it compares to the United States. The Brazilian market is much more focused on the morning occasions and is more health-oriented

BRAZIL ENERGY DRINK MARKET
(% of total consumption)

Time of day	Total consumption	Motivation	
		Health	Pleasure
AM	75%	55%	45%
PM	25%	50%	50%
Total	100%	54%	46%

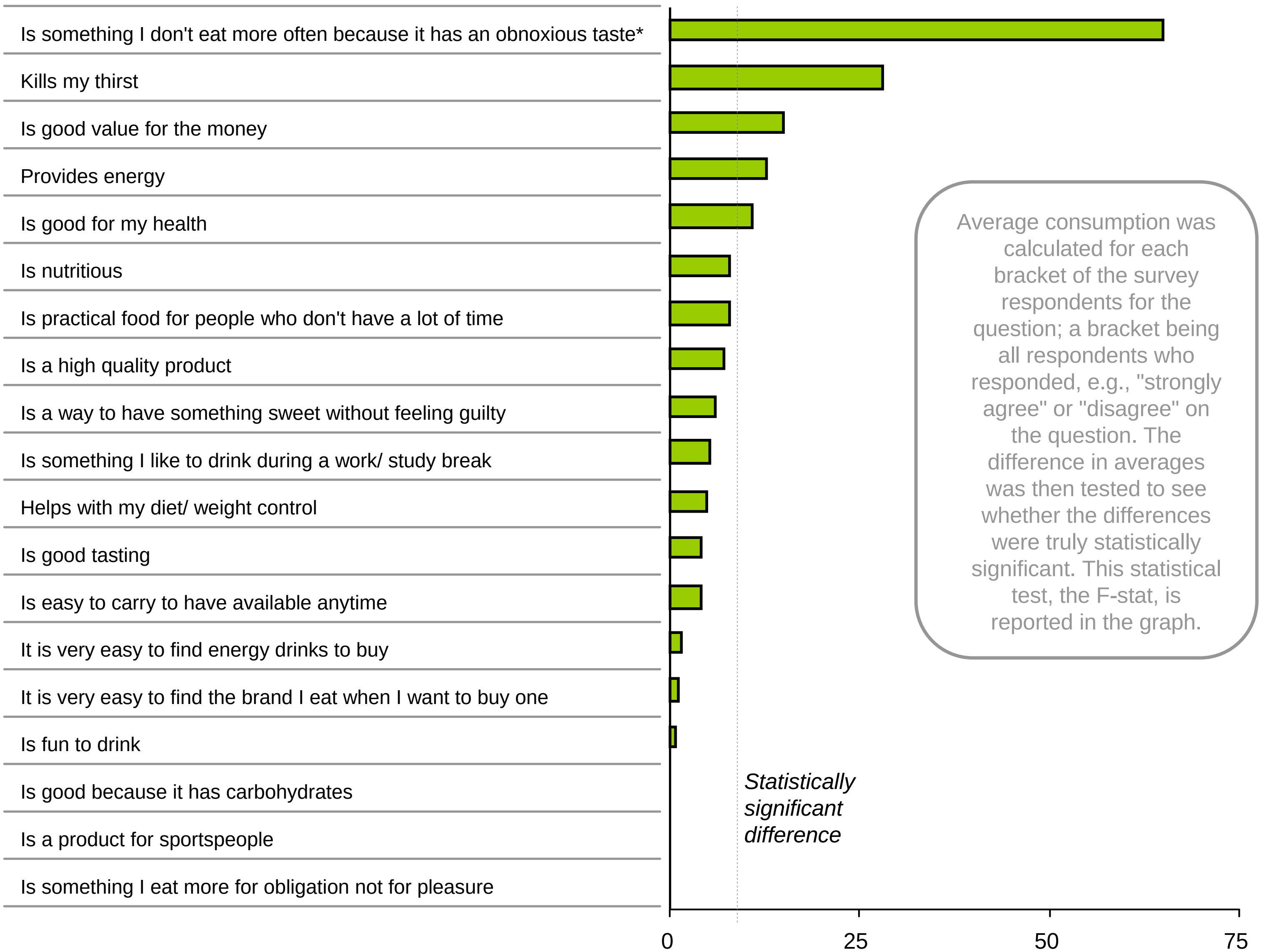
US ENERGY DRINK MARKET
(% of total consumption)

Time of day	Total consumption	Motivation	
		Health	Pleasure
AM	48%	55%	45%
PM	52%	36%	64%
Total	100%	43%	57%

A key reason for the small size of the market is that Brazilian non-consumers by and large view energy drinks as bad-tasting products that do not "satisfy their stomachs"

ATTITUDINAL DIFFERENCES BETWEEN CONSUMERS AND NON-CONSUMERS

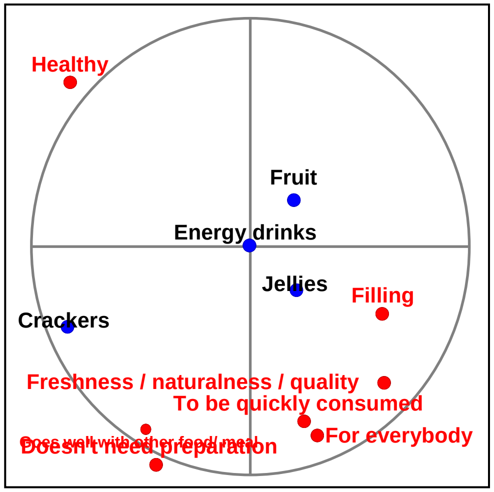
(Consumption difference significance for heavy and light/non eaters)



Average consumption was calculated for each bracket of the survey respondents for the question; a bracket being all respondents who responded, e.g., "strongly agree" or "disagree" on the question. The difference in averages was then tested to see whether the differences were truly statistically significant. This statistical test, the F-stat, is reported in the graph.

Brazilians’ negative perception of energy drinks contrasts to a country such as Mexico, where consumption is 8 times higher

BRAZIL – FACTOR MAPPING
(Excerpt)



BRAZIL ASSOCIATIONS

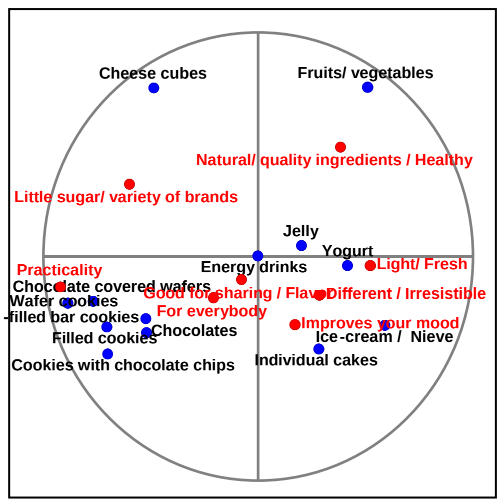
Associations	Distance*
Filling	13
To be quickly consumed	16
Freshness / naturalness / quality	17
For everybody	18

BRAZIL RELATED PRODUCTS

Products	Distance*
Fruit	5
Jellies	5
Crackers	18

- Factor mapping shows how closely consumers relate energy drinks to associations or with other products
- On each map, the shorter the distance between two points, the closer the relationship in the minds of consumers

MEXICO – FACTOR MAPPING
(Excerpt)



MEXICO ASSOCIATIONS

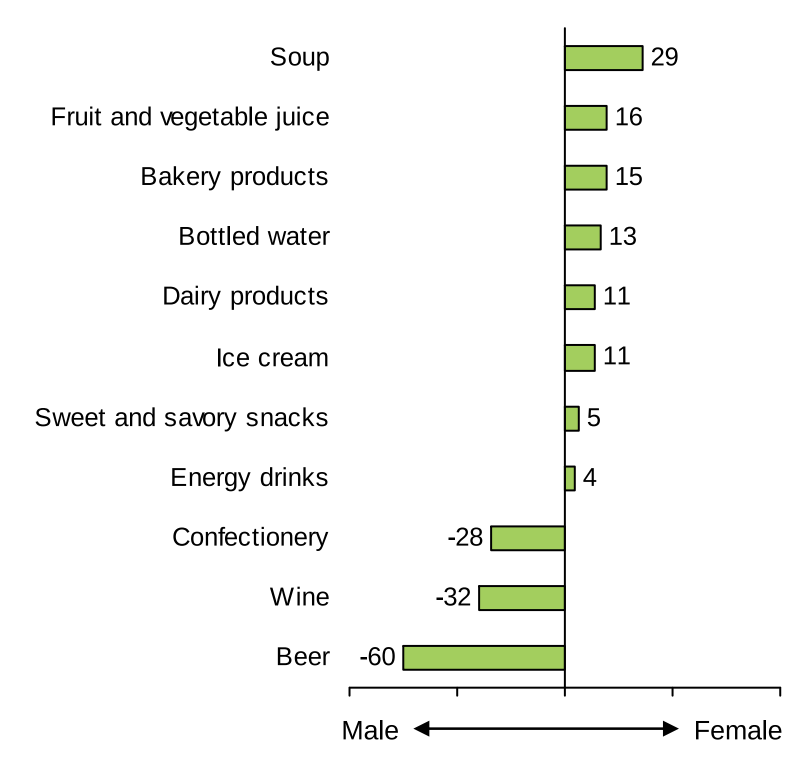
Associations	Distance*
Flavor	2
Good for sharing	2
For everybody	5
Different / irresistible	6
Improves your mood	7
Light / fresh	10
Natural / quality ingredients / healthy	12
Little sugar	13
Variety of brands	13
Practicality	18

MEXICO RELATED PRODUCTS

Associations	Distance*
Jelly	3
Yogurt	8
Individual cakes	10
Fruit filled bar cookies	11
Chocolates	12
Ice cream	13
Filled cookies	15
Chocolate covered wafers	15
Chocolate chip cookies	16
Fruit	18
Cheese cubes	18
Wafer cookies	18

Energy drinks are one of the most gender-neutral food categories in the world and Brazil is no exception. The reasons for consuming energy drinks differ significantly between men and women though

GLOBAL GENDER SKEW FOR SELECTED CATEGORIES
(Purchase differential)



BEHAVIORAL AND ATTITUDINAL DIFFERENCES BETWEEN MEN AND WOMEN

Characteristic	M	F	Sig.
Yogurt consumption frequency	1.62	**1.76**	0.983
Soft drinks consumption frequency	**1.29**	1.08	0.992
Salty snacks consumption frequency	**1.15**	0.98	0.978
Energy drinks help with my diet / weight control	3.40	**3.86**	1.000
Energy drinks are a way to have something sweet without feeling guilty	3.10	**3.43**	0.986
Energy drinks should be more indulgent	**3.13**	2.71	0.998
Bottle size should be increased	**2.45**	2.29	0.984
I consume energy drinks because of nutritionist recommendation	2%	**12%**	1.000
In my diet, energy drinks replaced soda	**23%**	15%	0.920
In my diet, energy drinks replaced juice	14%	**23%**	0.966
I consume energy drinks for pleasure / indulgence	**61%**	40%	0.974
I consume energy drinks for health / diet	29%	**49%**	0.974

- Men prioritize pleasure and want larger sizes, women prioritize health

While healthiness and convenience are well-addressed by current offerings, taste is clearly lacking

BENEFIT	IMPORTANCE*	DIFFERENCE IN SCORE* FOR CONSUMERS VS NON-CONSUMERS	OBSERVATION
Healthy	0.68	0.12	• ***Most important*** and currently **well** met by the products in the market
Tasty	0.26	1.13	• ***Second most important*** and currently **poorly** met by the products in the market
Convenient	0.12	0.30	• ***Third most important*** and currently **well** met by the products in the market

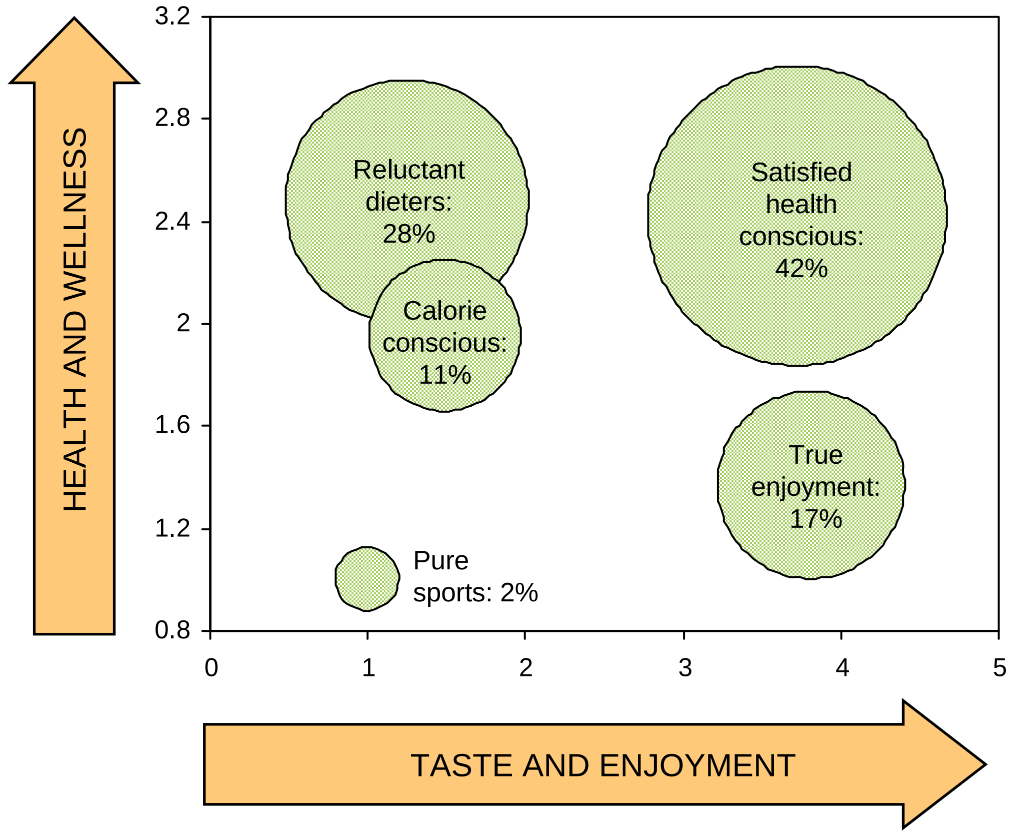
The situation contrasts sharply with that in Mexico, where energy drinks score highly on taste and enjoyment dimensions, and consequently enjoy much higher (8x more) consumption than in Brazil

Segmenting Brazilian energy drink consumers reveals that the bulk of the market is currently in the health/wellness domain, quite different from well developed markets such as Mexico

Segment	Drinks per month	Age skew	Purchase locations	Profile
True enjoyment	10	Younger	All outlets	Like energy drinks for taste, no interest in other benefits
Pure sports	6	Younger	Others*	Dislike taste; only a convenient way to get calories between activities
Reluctant dieters	8	Older	Bars / bakeries	Dislike taste and don't see nutritional benefits; dieting; and drinks allow something sweet without violating diet
Calorie conscious	9	All ages	Super-markets	Dislike taste and don't see nutritional benefits; low-calorie way to satisfy thirst (not dieters)
Satisfied health conscious	13	All ages	All outlets	Enjoy taste and find drinks healthy, nutritious and practical

In addition, gender skews heavily male for Pure Sports, somewhat male for True Enjoyment

ENERGY DRINK CONSUMER SEGMENTS
(Share of market)



One additional finding is important: Energy drinks tend to succeed in markets where RTE cereals and biscuits do well, while they do poorly in bread-, yogurt-, and nut-intense countries and Brazil is no exception

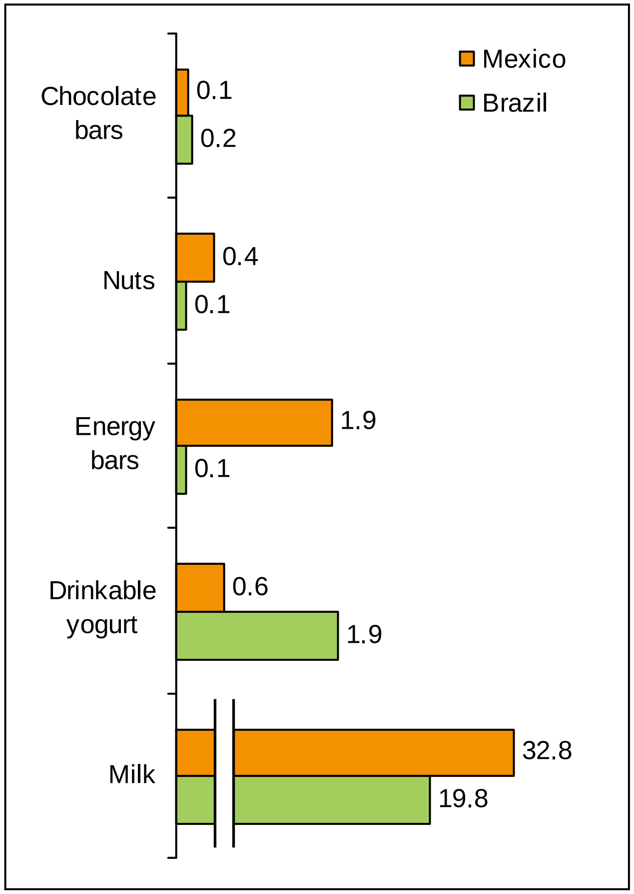
SIGNIFICANT ENERGY DRINK INTERACTIONS WITH OTHER PRODUCT CATEGORIES
(Euromonitor data)

Category	Effect on energy drinks
Energy bars	+0.95
Drinkable yogurt	+0.38
Milk	+0.28
Coffee	-0.55
Chocolate bars	-0.64
Nuts	-0.77

SIGNIFICANT ENERGY DRINK INTERACTIONS WITH OTHER PRODUCT CATEGORIES
(Brazil survey data)

Category	Effect on energy drinks
Energy bars	+0.46
Milk	+0.37
Diet soft drinks	+0.36
Milk	+0.34
Coffee	-0.24

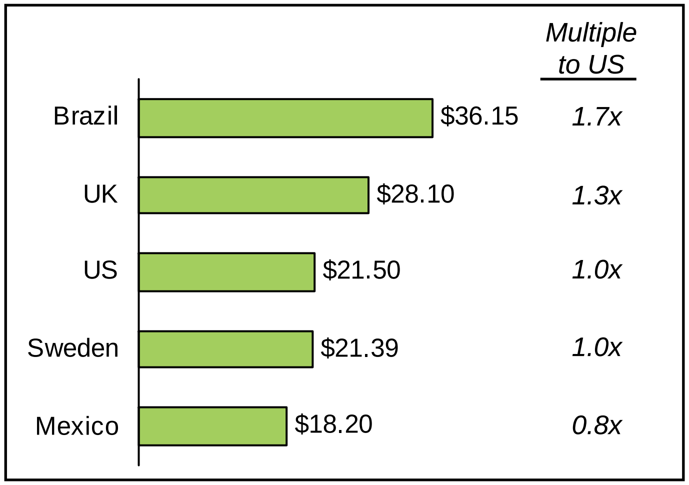
ANNUAL CONSUMPTION
(kg per capita)



Energy drink prices in Brazil are higher than those in many other countries, and also higher than other categories within the country

AVERAGE PRICE PER LITER OF ENERGY DRINKS*

(US$, Purchasing Power Parity (PPP)-adjusted)

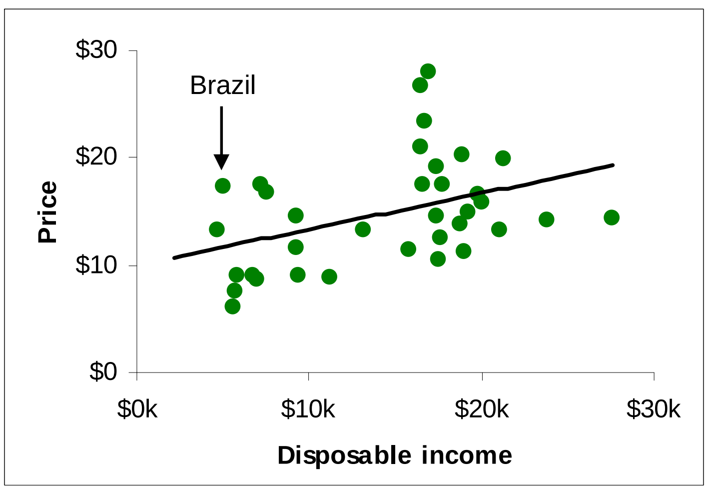


- Brazil's prices are higher than those well-developed energy drink markets, and relatively more expensive than other drinks within Brazil
- Private labels priced 20-30% below branded products play an increasingly important role, but still account for less than 5% of the market

"In this market there is no brand fidelity, price is the main driver."
- XCo

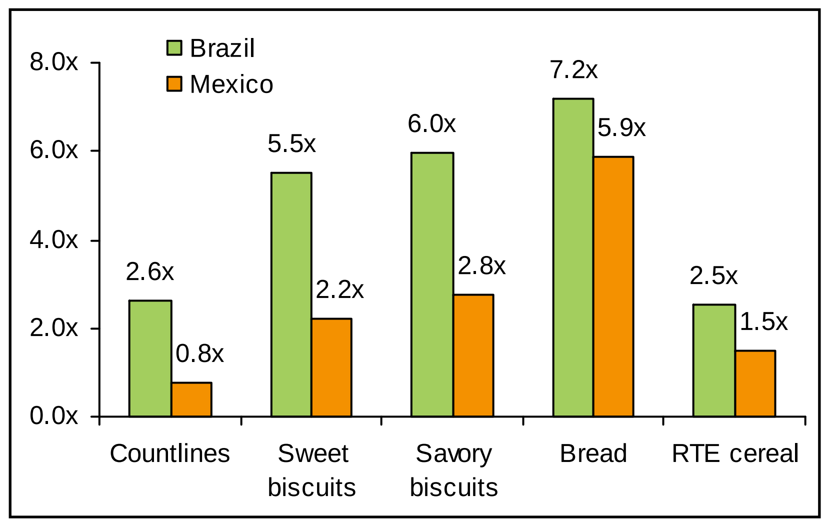
PRICE VS DISPOSABLE INCOME

(US$, Purchasing Power Parity (PPP)-adjusted)



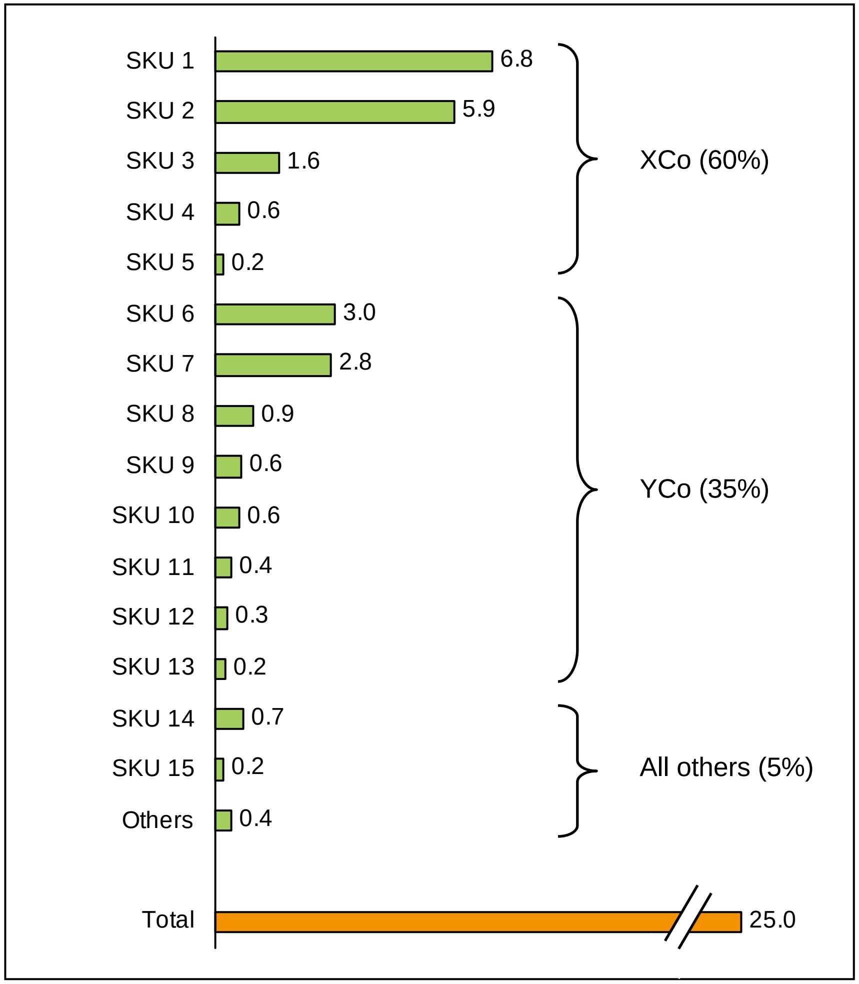
PRICE MULTIPLE OF ENERGY DRINKS

(Per kg, price of product per price of energy drinks)



The brand-level competition is quite different from the manufacturer shares. XCo and YCo have 95% of the market and once successful players like ZCo have been marginalized

MARKET SHARE BY PRODUCT
(Year ending AM ’06, MM of liters)



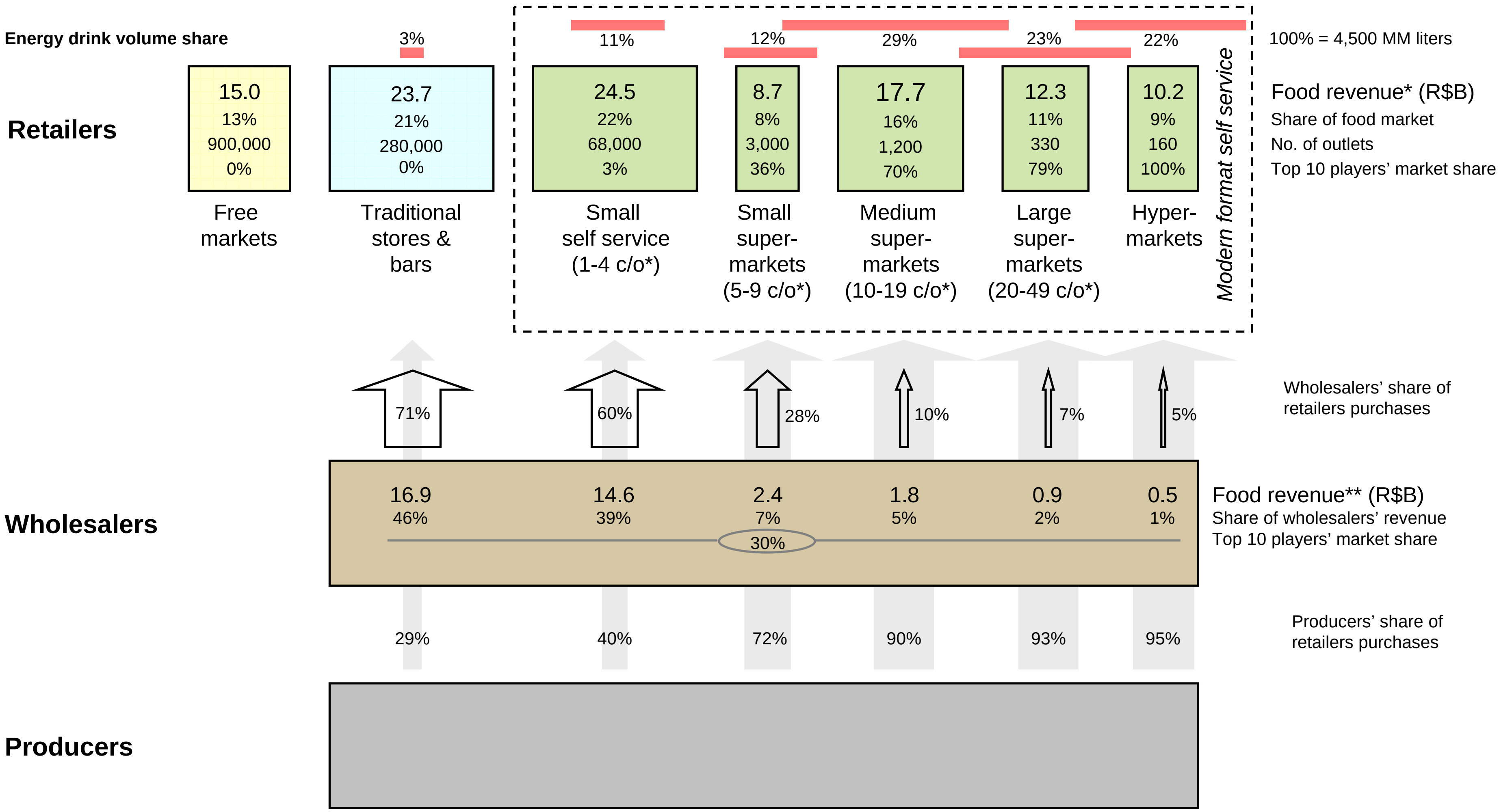
CONSUMERS HAVE TWO CHOICES:

EITHER XCO. . .

. . . OR YCO

The food retail trade is highly fragmented in Brazil, but energy drink sales are concentrated in the larger outlets where market concentration is high

BRAZILIAN FOOD RETAIL ENVIRONMENT, 2005



Category performance in outlets is dependent on variety and constant portfolio renewal

- The energy drink category performs best in outlets that offer a range of brands and flavors

> "The category is very profitable because it has high turnover, but to keep this turnover we always need to have new products and flavors"
> - Supermarket manager, Rio de Janeiro

- This is mainly due to the variety of choices offered to consumers which stimulates consumption

> "Each time I buy a different flavor. I prefer cola-flavored drinks, but I switch between fruit flavors as well."
> - Cristiana, São Paulo

- A large product portfolio also encourages volume purchases, as consumers of multi-packs tend to buy more than one box at a time, but not of the same flavor
- Finally, constant renewal of the product portfolio is critical

> "The new XCo energy drink, for example, sold everything in less than 2 weeks."
> - Drugstore manager, São Paulo

Also, a key finding from the survey is that heavy consumers purchase energy drinks from supermarkets and small outlets with equal frequency

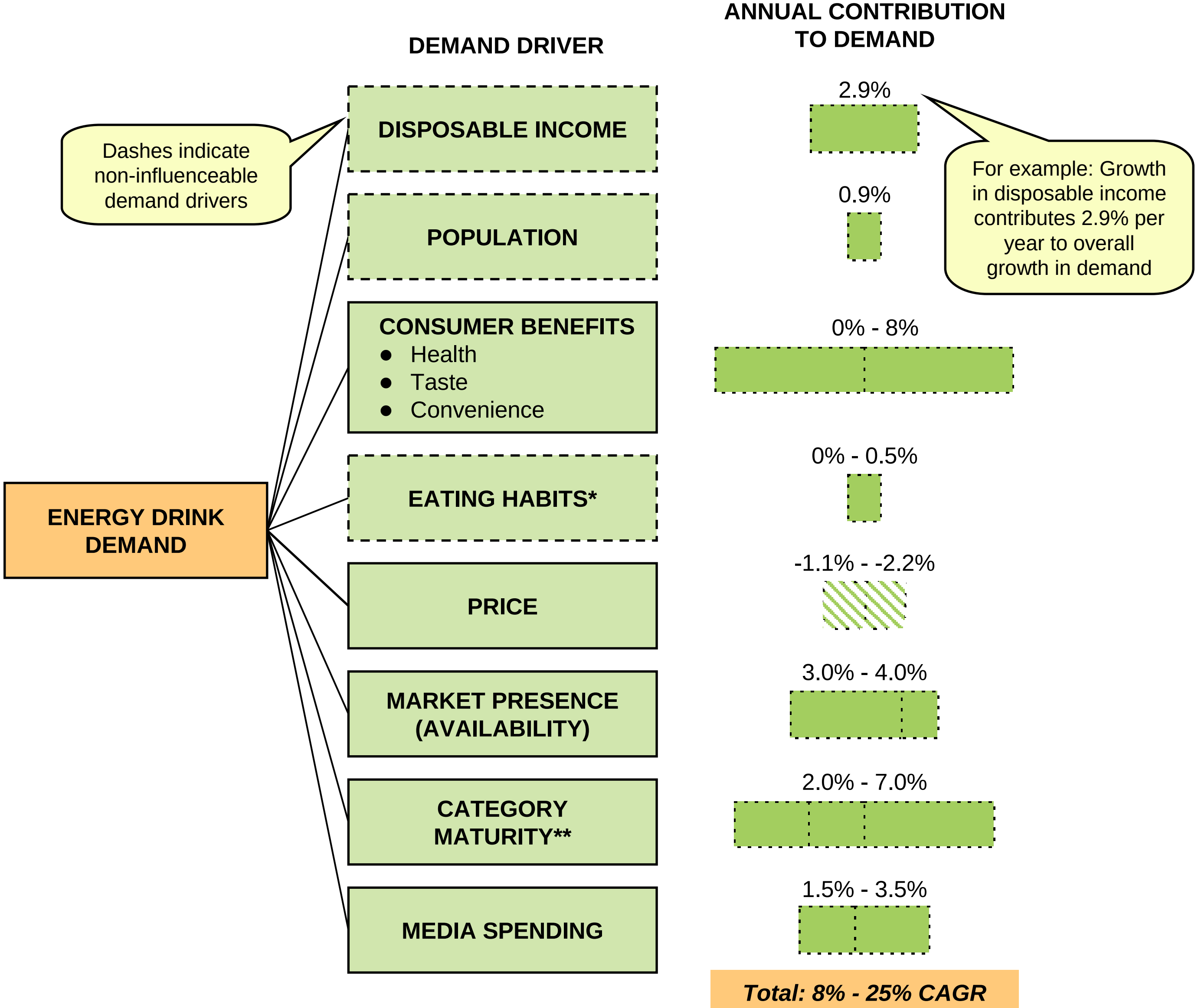
CARREFOUR
(São Paulo)

Photo partially obscured

ZONA SUL SUPERMARKET
(Rio de Janeiro)

Photo partially obscured

The Golder Tellis model indicates that growth in Brazilian demand for energy drinks will be significantly influenced by changes in consumer benefits, category maturity, media spending, and market presence



Technically, the model builds on two data sets:

1. A global database that includes volumes, prices, disposable income, population, media spending, category maturity, and other variables for 37 countries

2. A Brazilian consumer survey database with 450 respondents in 3 cities that includes 150 response items covering attitudes, usage, beliefs and associations, as well as lifestyle and economic / demographic items

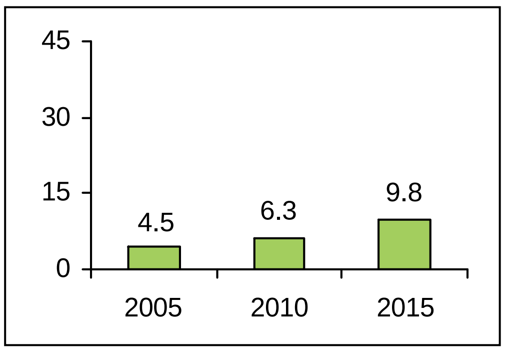
The databases are used to calculate elasticities and coefficients using advanced regression techniques

The global (1 above) and individual (2 above) models are reconciled so that effects are not duplicated

The projections show that absolute volumes will become significant when players execute their market strategies flawlessly and with substantial investments

PROJECTED DEMAND FOR ENERGY DRINKS IN BRAZIL
(Thousands of liters)

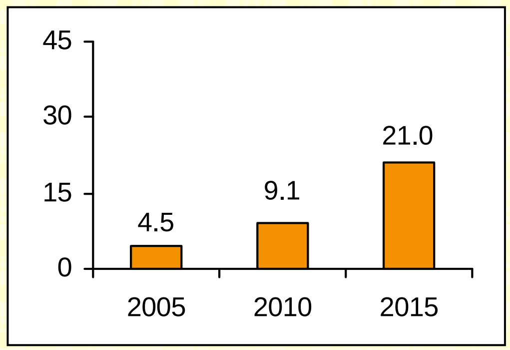
BUSINESS AS USUAL



IMPLIED CAGR

’05–’10	’10–’15	’05–’15
7.0%	9.1%	8.1%

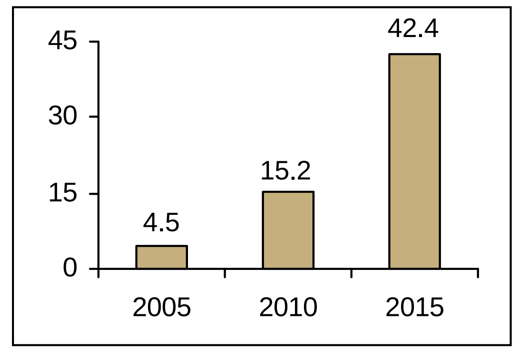
REALISTIC SCENARIO



IMPLIED CAGR

’05–’10	’10–’15	’05–’15
15.0%	18.3%	16.7%

FIRING ON ALL CYLINDERS



IMPLIED CAGR

’05–’10	’10–’15	’05–’15
27.5%	22.8%	25.1%

Both the “realistic” and “firing on all cylinders” scenarios assume significant shifts in market strategies

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