

Domestic and Emerging Market Analysis of Major Retail Oral Toothpaste

A Comparative Analysis of Procter & Gamble and Colgate-Palmolive



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THE COMPANIES

Procter and Gamble's and Colgate-Palmolive's success has revolved around a stated purpose, which is to *"provide products and services of superior quality and value that improve the lives of the worlds consumers."* (Malhotra, 2010) The key terms of interest in this mission statement are **"quality and value."** The process of reaching these goals can only be accomplished with detailed consumer knowledge through innovation and superior market research.

As two of the most profitable companies in the world with over \$90 billion dollars in revenue in 2010, Colgate-Palmolive (#151,\$15B) and Procter & Gamble (#22, \$78B) were listed within the sector as two of the most successful retail organizations globally. (Fortune, 2010)

THE MDP AND MRP (Relating to P&G/ Colgate-Palmolive)

Our text describes the **Management Decision Problem (MDP)** as a process that identifies and asks decision makers, what needs to be done? This action-oriented process includes defining the problem via a set of symptoms. (Malhotra, 2010) Much of Procter and Gamble's and Colgate-Palmolive's profitability in business segments can be attributed to raising product price points by \$4 billion in 2009. Although price increases did grow revenue by 11% in 2010, they were implemented across all market segments to alleviate economic global stressors. (Yahoo Finance, 2010)

The management decision problem for Procter and Gamble revolves around increasing revenues of Colgate-Palmolive via a current dependence on increased product unit pricing. The recommendation includes seeking solutions to address such issues and symptoms by aggressively approaching emerging international markets.

Increasing product usage in emerging economies such as China and India will increase product breath and depth for new and existing consumers.

Procter and Gamble consistently identifies product relevancy as, “*what is in this for the consumer?*” (Malhotra, 2010) Currently P&G markets to more than 5 billion consumers in 180 countries identifying that 12 of its billion-dollar brands are global market leaders in their respective market segments. (P&G Annual Report, 2010)

Colgate-Palmolive and CEO Ian Cook have taken Household and Personal Products to the next level. The organization has assembled assets greater than \$11 billion and a developed mission to expand an organization that began in the 19th century. Serving more than 900 million consumers worldwide, Colgate-Palmolive is targeting P&G in emerging markets in both India and China.

Unlike the **Management Decision Problem (MDP)** the **Marketing Research Problem (MRP)** determines what types of information are required to solve the issue and more importantly how to get that information to address underlying concerns. (Malhotra, 2010)

The remainder of this document contains an in-depth market analysis of P&G’s dental retail business and its major competitor Colgate-Palmolive within the emerging markets of India and China.

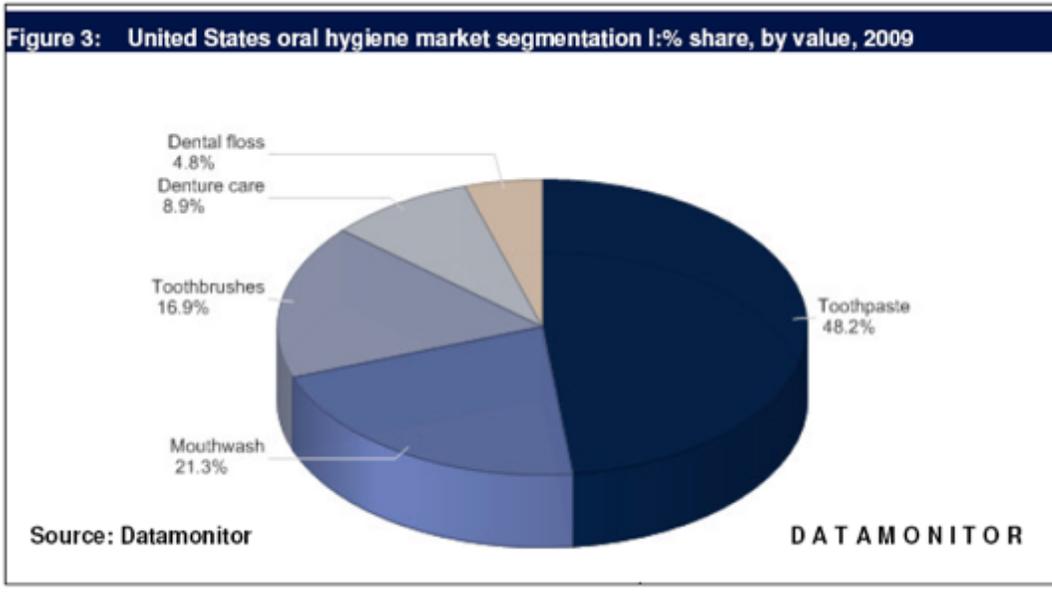
In addressing P&G’s marketing decision problem it is important to understand P&G’s strategy in emerging global markets. In 2009, 32% of total net sales came from developing nations. (P&G Annual Report, 2010) CEO Bob McDonald stated that it is a priority to grow sales in China and India to reach 1 billion more customers by 2014. (Yahoo Finance, 2010) As an example, the average Mexican consumer spends approximately \$20 per-capita on P&G products. The Chinese and Indian equivalent are \$3 and \$1 respectively. (Yahoo Finance, 2010) Qualitative market research may confirm company predictions that increased sales to India and China at similar levels of Mexico’s consumption would add \$40 billion in sales to overall revenue. (Yahoo Finance, 2010) These estimates far exceed the revenue results of 2009 and the actions taken to increase individual product price points.

P&G has most recently announced future business development opportunities in India with its Wella hair color products. (Yahoo Finance, 2010) This is a great way of addressing the management decision problem to increase product depth and breadth in emerging markets. Brand opportunity is developing in China to reach more than 800 million people. (Yahoo Finance, 2010)

ORAL HYGIENE MARKET IN THE U.S. - MAJOR FINDINGS 2009

The results and recommendations provided within this document present Toothpaste Brand Market Share for the year 2009 within the United States. In assignment 1.2 and 1.3 we identified that both the MDP and MRP for P&G revolved around market growth in the United States by price increases and/or growth in emerging Asian markets. (India/ Japan) By utilizing multiple sources through online databases, I have been able to determine MS brand leaders with secondary data, as well as potential market obstacles within the industry. To better understand the brand MS outcomes and where P&G is going, we must first understand some market basics.

A brief overview of the Oral Hygiene Market (toothpaste sales) in the United States provides some insight in regard to profitability and impact within this industry profile. By using Datamonitor Industry Profile Information, we are able to see that the United States Oral Hygiene Market grew in 2009 by 1.2% reaching \$5,648.5 million, with expectations to grow another 2.1% by 2014. (Business Source US, 2010) More importantly, toothpaste represents the largest segment of the Oral Hygiene Market in the United States, accounting for 48.2% of total market value exceeding \$2.7 Billion. (Business Source US, 2010)



UNITED STATES AND ASIA TOOTHPASTE MARKETS 2009

As we narrow down the toothpaste markets by country we find that four key players hold over 95% of MS in the United States. (Business Source US, 2010) Using multiple sources, it is recognizable that Colgate-Palmolive, Procter & Gamble, Glaxo-Smith Kline and Church & Dwight Co Inc. dominate the market with over 17 individual brands of toothpaste. (Mintel Toothpaste, 2009) As of April 2009, 52 week rolling data illustrates that Colgate-Palmolive outpaced P&G with a 1% market share lead with total brand MS reaching 36.5%. (Mintel Toothpaste, 2010)

Brand Sales and Market Share of Toothpaste in the U.S. (2009)							
Company/Brand	MS 2009 (\$ million)	Market April Share (%)	RANKING	Trending: 2010 (\$ million)	Market Share (%)	Share Change (%)	PROJECTED 2010 RANKING
OVERALL COMPANY RANKINGS							
Colgate-Palmolive	\$466	36.5	1	\$455	35.5	-1	1
Procter & Gamble	\$454	35.5	2	\$444	34.6	-0.9	2
GlaxoSmithKline	\$180	14.1	3	\$208	16.3	2.2	3
Church & Dwight Co. Inc.	\$115	9	4	\$117	9.1	0.1	4
Private label	\$7	0.6	6	\$6	0.5	-0.1	6
Other	\$54	4.2	5	\$51	4	-0.2	5
Total Toothpaste Market	\$1,276	100		\$1,282	100		

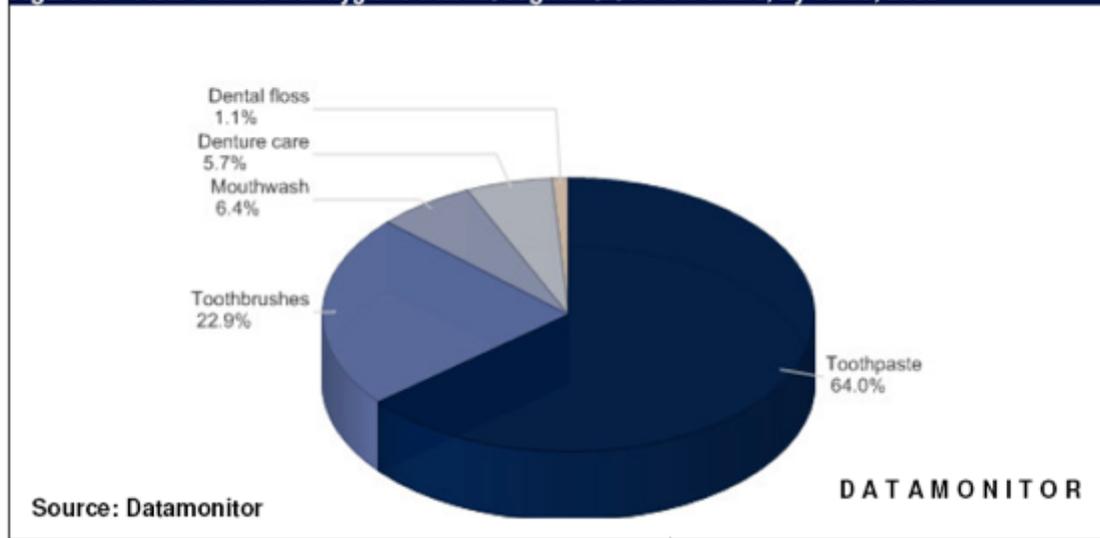
A deeper look into specific brand MS in the US reveals that Crest and Colgate are the 5 brand leaders in the US market. The table below represents data located through the Mintel Database for toothpaste brand MS. The 2009 individual brand MS (trending toward 2010) results show that Procter and Gamble's Crest Whitening Plus Scope is the #1 market leader with \$115 million in sales and a 9% MS. (Mintel Toothpaste, 2010) Trends also show a decrease to 8.9% MS into 2010 as Crest increased from 8.2% to 8.5% in the same time frame. (Mintel Toothpaste, 2010) Rounding out the top three brands is Colgate Total with a 7.2% MS totaling \$92 million in sales.

Most impressively, is that both P&G's Crest Whitening Plus Scope and Crest make up 17.2% MS in 2009. These two brands exceed Glaxo-Smith Kline's entire toothpaste franchise of 14.1% MS. (Mintel Toothpaste, 2010) **(SEE TABLE 1 ATTACHED FOR A COMPLETE OVERVIEW OF THE M.S. RETAIL TOOTHPASTE MARKET IN THE U.S.)**

Brand Sales and Market Share of Toothpaste in the U.S. (2009)							
Company/Brand	MS 2009 (\$ million)	Market April Share (%)	RANKING	Trending: 2010 (\$ million)	Market Share (%)	Share Change (%)	PROJECTED 2010 RANKING
INDIVIDUAL BRAND MS							
<i>Crest Whitening Plus Scope</i>	\$115	9	1	\$113	8.9	-0.1	1
<i>Crest</i>	\$105	8.2	2	\$109	8.5	0.3	2
<i>Colgate Total</i>	\$92	7.2	3	\$90	7	-0.2	3
<i>Colgate</i>	\$89	7	4	\$89	6.9	-0.1	4
<i>Crest Pro-Health</i>	\$73	5.7	5	\$79	6.2	0.5	5
<i>Sensodyne</i>	\$54	4.2	6T	\$55	4.3	0.1	6
<i>Colgate Max Fresh</i>	\$53	4.2	6T	\$48	3.7	-0.5	7
<i>Crest Whitening Expressions</i>	\$39	3.1	8	\$31	2.4	-0.7	8T
<i>Colgate Total Advanced Clean</i>	\$37	2.9	9	\$30	2.4	-0.5	8T
<i>Crest Extra Whitening</i>	\$30	2.4	10T	\$25	1.9	-0.5	14T
<i>Aquafresh Extreme Clean</i>	\$30	2.4	10T	\$26	2	-0.4	12T
<i>Colgate 2 in 1</i>	\$28	2.2	12	\$24	1.9	-0.3	14T
<i>Arm & Hammer Advance White</i>	\$27	2.1	13T	\$26	2	-0.1	12T
<i>Colgate Total Advanced Whitening</i>	\$27	2.1	13T	\$28	2.2	0.1	10T
<i>Aquafresh</i>	\$20	1.6	15	\$20	1.5	-0.1	16
<i>Sensodyne ProNamel</i>	\$17	1.3	16	\$29	2.2	0.9	10T
<i>Orajel Toddler</i>	\$16	1.2	17	\$13	1	-0.2	18
<i>Arm & Hammer Complete Care</i>	\$12	0.9	18	\$14	1.1	0.2	17
TOTAL BRAND MS (OTHER)							
<i>Colgate Other Combined</i>	\$140	10.9	1	\$146	11.4	0.5	1
<i>Procter and Gamble Other Combined</i>	\$91	7.1	2	\$86	6.7	-0.4	2
<i>GlaxoSmithKline Other Combined</i>	\$59	4.6	3	\$79	6.2	1.6	3
<i>Churh & Dwight Co. Inc Other Combined</i>	\$60	4.7	4	\$64	5	0.3	4

Source: Mintel Databases

Figure 3: Asia-Pacific oral hygiene market segmentation (% share, by value, 2009)



As we look at both the market potential in the United States and Asia, two important data items should be recognized. The United States market is controlled by the same 10 to 12 brands per year, with the top five brands represented by P&G and Colgate. In 2009 Much of Procter and Gamble's profitably was attributed to raising product price points by \$4 billion. (P&G Annual Report, 2010) Although these price increases did grow revenue by 11%, they were implemented across all market segments to alleviate economic global stressors. (P&G Annual Report, 2010) Secondly, the market potential in Asia far exceeds the United States. Toothpaste makes up about 48% of the oral hygiene market, where as the Asia Pacific Region represent almost 65% of revenue from toothpaste. (Business Source US, 2010) **The question is: Should P&G continue to brand the US to grow share or expand rapidly into emerging Asian markets?**

As a market researcher identifying future revenue growth at P&G, I recommend continued MS brand strategies in the United States. Of the top five brands in United States MS in 2009, P&G represents three of five, totaling 22.9% MS. (Mintel Toothpaste, 2010) Thus, only trailing Colgate by 1%. A 2% MS shift in 2010 in favor of any Crest Brand in the Top 5, would increase revenues dramatically. There is much to be said for marginal growth in this industry,

as minimal share change represents such large revenues. **Therefore, I recommend growing share in the toothpaste category, aiming for 2% growth in either the CREST, CREST WHITENING PLUS SCOPE or CREST PRO-HEALTH brands.** This would account for the current 1% deficit in US brand market share behind Colgate and place P&G as the leading organization in the United States.

CONSUMER UNDERSTANDING IN INDIA AND CHINA

Consumer Understanding has always been a cornerstone at P&G. (P&G, 2010)

They have maximized consumer research to better understand and respond to customers' needs and wants. Further discussion around how exploratory, causal and descriptive research analysis will benefit P&G will be addressed in assignment 1 task 3.

With over 15,000 research studies per year, *consumer understanding* has enabled product innovation in packaging, development and marketing. (P&G Annual Report, 2010) Researching and understanding what is important to these two consumer groups through qualitative research will help P&G increase profit and provide superior value to a larger consumer base.

By increasing product usage and developing brand recognition in these two emerging economies, product breadth and depth for new and existing consumers will contribute greatly to overall growth.

UNDERSTANDING THE RESEARCH DESIGNS NEEDED

This international marketing issue presents cultural differences when conducting market research. As it is difficult to address all cultural differences in both India and China, the research techniques and methods that follow are generalized to address the formulation to solve the MRP.

Our text states, that it is important to consider all cultural and environmental differences, noting that all research designs may not be appropriate for various cultural networks. (Malhotra, 2010) Additionally, developing countries require different implementations of research consisting of both primary and secondary data collection methods. In the case of Procter and Gamble, Critical Path Methods (CPM) is also valuable to divide the project into component activities that determine sequencing.

IE: Special attention should be paid to research surveys, questionnaire design and sample considerations. (Malhotra, 2010) This is important as Procter and Gamble will need to identify external environmental and economic issues while conducting market research overseas. Specifically both controllable and uncontrollable issues:

1. Geography and Infrastructure
2. Level of Technology
3. Structure of Distribution
4. Cultural Forces
5. Political and Legal Forces
6. Foreign Environment (Uncontrollable)
7. Economic Forces
8. Competitive Forces

(Zlatev, 2010 Lecture 1)

The identified marketing research problem at Procter and Gamble can only be accomplished by approaching the problem from different angles with different market research techniques. (Zlatev, 2010 Lecture 2) Formulating and analysis for Procter and Gamble includes a need to conduct product, pricing and promotional research through Exploratory (Qualitative Research/ Secondary Data) and Descriptive Research methods. These methods are important to uncover unknown obstacles to increase brand awareness in China and India as they reach 1 billion consumers by 2014.

EXPLORATORY RESEARCH (Secondary and Qualitative Research)

The discussion has been made that entering developing markets is critical for success through periods of stagnation. When profits are increased minimally due to marginal product innovation, exploratory research can reveal creative techniques to realign brands.

SECONDARY RESEARCH

Assuming Procter and Gamble houses an internal research department, there will be ample data that is readily available on demographic, social and economic differences in the respective nations. Furthermore, external secondary data by nature are inexpensive and unique to provide data quickly. (Malhotra, 2010) Important examples of external secondary data that relate to retail sales in China and India are provided below. (Intel Market Research, 2008) **At the current time Colgate-Palmolive Company (20.9% MS) is the brand leader in the Asia-Pacific region, allowing growth potential for P&G. Finally, Japan and India account for 33.3% MS and 12.5% MS respectively in the Asia Pacific market. (Business Source US, 2010)**

CHINA

Population – 1.33 Billion (Consumers) #1 in the world

51% Male / 49% Female

Retail Sales- \$1.85 Trillion Ranking #1 in the world

Retail data, by region, 2008

Region	Retail sales, (RMB m, excl. sales tax)	Number of stores	Selling area (^{'000} m ²)	Employed persons (^{'000s})
Guangdong	226,220	23,438	17,109	254
Jiangsu	216,310	15,208	13,043	309
Shanghai	173,490	16,913	7,298	249
Beijing	111,990	6,059	4,955	132
Zhejiang	103,680	20,074	9,055	126
Shandong	76,800	8,757	10,640	108

Type of retail	Retail sales	% of major retailers' sales
Integrated retail	1,092	32.1
<i>Retail of general merchandise</i>	600	17.7
<i>Retail of supermarkets</i>	446	13.1
Retail of food, beverages and tobacco	58	1.7
Special retail of textiles, garments & daily consumer articles	118	3.5
<i>Retail of garments</i>	74	2.2
Retail of culture, sports appliances and equipments	83	2.4
<i>Retail of sports goods</i>	3	0.1
<i>Retail of books</i>	43	1.3
Retail of medicines and medical appliances	123	3.6
<i>Retail of medicines</i>	116	3.4
Retail of motor vehicles, motorcycles, fuel	1,488	43.8
<i>Retail of motor vehicles</i>	922	27.1
<i>Retail of fuel</i>	534	15.7
Special retail of household electric appliances	320	9.4
<i>Retail of household electric appliances</i>	227	6.7
<i>Retail of computer, software and assistant appliances</i>	54	1.6
<i>Retail of communication equipment</i>	31	0.9
Special retail of hardware, furniture and decoration materials	59	1.7
Non-shop and other retail	58	1.7
<i>Post and e-commerce</i>	8	0.2
Total retail trade	3,398	100.0

INDIA

Population – 1.16 Billion (Consumers) #2 in the world

52% Male / 48% Female

Retail Sales- \$342 Billion dollars Ranking #3 in the world

India: Estimated retail sales, 2005-09

	2005	2006	2007	2008	2009
Estimated retail sales	11,117	13,636	14,931	15,931	16,712
% change	+16.8	+22.7	+9.5	+6.7	+4.9
<i>Of which:</i>					
Organised retail	389	491	624	721	830

India: Consumer expenditure, 2000-09

	Current prices	% change	Constant (2000) prices	% change
2000	14,539,253	+7.0	14,539,253	+3.6
2001	15,886,863	+9.3	15,370,090	+5.7
2002	16,776,302	+5.6	15,806,367	+2.8
2003	18,407,104	+9.7	16,753,870	+6.0
2004	19,969,143	+8.5	17,676,531	+5.5
2005	22,305,070	+11.7	18,875,691	+6.8
2006	25,066,115	+12.4	20,087,970	+6.4
2007	28,156,750	+12.3	21,715,488	+8.1
2008 (p)	32,181,980	+14.3	23,192,141	+6.8
2009 (p)	35,719,990	+11.0	24,189,403	+4.3

QUALITATIVE RESEARCH

There are distinct advantages to qualitative research. The objective is to gain a better understanding of underlying reasons/ motivations of the consumer. (Malhotra, 2010) These unstructured and non-statistical methods of research develop a better understanding of the problem at hand.

As a market leader, Procter and Gamble is not a stranger to qualitative research. It is frequently used to generate new ideas for product development. Leonara Polonsky, Marketing Director at P&G describes in-home marketing and shopping experiences as part of regular business. (Malhotra, 2010) There are three individual types of qualitative research methods that prove to be beneficial to better understand the Indian and Chinese consumer.

1. Focus Groups
2. Online Focus Groups
3. Depth Interviews

Focus group interviews are the most common and popular qualitative research method. These 8 to 12 member sessions provide researchers a better understanding of consumer behavior by providing a relaxed environment to promote synergy and dynamics. (Malhotra, 2010) Market Researchers live by the 10 S's to create an advantageous experience for selected focus group participants. (Synergism, Snowballing, Stimulation, Security, Spontaneity, Serendipity, Specialization, Scientific Scrutiny, Structure and Speed) The advantage of this tactic for P&G is to gather a homogeneous group of consumers representing similar demographic and socioeconomic characteristics. (Malhotra, 2010)

The second qualitative research method of great importance to Procter and Gamble includes online focus group interviews. Similar to the live interaction, online focus groups provide a distinct advantage of speed in producing information. In most cases raw data from these sessions are readily available upon completion with finalized results in 48 hours. (Malhotra, 2010)

Due to the lack of face-to-face contact, online focus groups are somewhat smaller. Our text recommends 7 respondents per group for such online activities in

Asia. (Malhotra, 2010) P&G's goal is to produce increased patronage (breadth and depth) by 2014 in both China and India. Thus, online focus groups are an intricate research method in the formulation of research analysis.

The third and final qualitative research method consists of Depth Interviews. These personal one-on-one interviews are valuable in obtaining professional opinions through various techniques. One important technique useful for conservative nations such as China and India are "projective" forms of questioning. This method encourages respondents to project motivations, beliefs, and attitudes of others. (Malhotra, 2010)

DESCRIPTIVE RESEARCH

The use of survey methods through descriptive research is useful in addition to qualitative data in the development of P&G's brand strategy in China and India. There are two specific methods that are suggested in the formulation of this research analysis.

1. Internet Interviews
2. Computer-Assisted Personal Interviewing (CAPI)

Both of these survey methods can be used in conjunction with the strong market distribution around the globe. Although Internet surveys carry a lower response rate, they are useful in promoting toward mass populations. It was noted earlier that both China and India rank #1 and # 2 respectively in global population. Statistically, if there is a region in the world to initiate a lower percentage method of descriptive research based on population, it is in Asia.

The use of Computer-Assisted Personal Interviewing (CAPI) with touch screen survey software would create a personal interactive environment for consumers. Such kiosks could be placed in the largest retailers in both China and India for retail market research. A list of the largest retail operations in both China and India are listed below.

Largest Retailers in China

Leading retailers, 2008/09 and 2009/10

Retailer (parent/country of origin)	Operations	No. of outlets 2008/09	Sales (RMB bn, excl. sales tax) 2008/09	Sales (RMB bn, excl. sales tax) 2009/10
Brilliance Group Co., Ltd	Supermarkets, hypermarkets, convenience stores, department stores	6,418	94.3	97.9
DaShang Group	Shopping centres, department stores, hypermarkets, supermarkets, electricals	150	62.6	70.5
CR Vanguard	Supermarkets, hypermarkets, clothing stores	2,698	63.8	68.0
SUNING home Appliance	Electricals	812	49.9	58.3
Gome Home Appliance Group	Electricals	903	45.9	42.7
RT Mart (Auchan, France)	Hypermarkets	101	33.6	40.4

Largest Retailers in India

India: Leading identified retailers, 2008/09 and 2009/10

Company (parent, country of origin)	Operation(s)	No. of stores 2009/10	2008/09 sales (INR m)	2009/10 sales (INR m)
Pantaloon (Future Group)	Multi-sector	421 (a, b)	63,417	77,368 (e)
Reliance Retail	Multi-sector	920 (a, c)	24,004	23,750
Shoppers Stop (K Raheja Group-Real Estate)	Department stores	80 (d)	13,180 (g)	14,780 (g)
more. (Aditya Birla Group)	Hypermarkets & supermarkets	637	10,300 (e)	14,600 (e)
Koutons Retail	Clothing	1,360	10,467	12,033
Vishal Retail Ltd	Mixed goods	135 (e)	13,232	11,050

(MINTEL MARKETING RESEARCH, 2010)

MINIMALIZING ERROR

Even the best research designs can result in sampling error. Random sampling error represents the greatest threat for inaccuracy for an imperfect representation of the population of interest. (Malhotra, 2010) Likewise non-sampling error includes

errors in the problem definition, questionnaire designs, and interview methods and data preparation. (Malhotra, 2010) The two types of errors that may most likely affect this study design are nonresponse errors and measurement errors. To minimize these types of mistakes it is critical that P&G develop a process to enable consumers the best environment to acquire the data needed to complete research. Error is inevitable and the use of unstructured qualitative research methods may enable risk for such errors. A carefully designed and implemented market research project will minimize the large potentials for error.

Only time will tell how much business Colgate-Palmolive will acquire from P&G by 2014 as Colgate continues to outpace with increased product breadth and depth in India and Asia. The research design presented gives Procter and Gamble the opportunity to launch new brand strategies based on cultural and economic differences in these two emerging countries. The combination of exploratory and qualitative research will give P&G the best-calculated representation to reach the 1 billion addition consumers needed. In assignment 1.2 I stated that if this venture is a success, P&G estimates that an additional \$40 Billion dollars in profit will be accrued for financial growth. This far exceeds the 11% revenue growth of 2009 by increasing price targets to grow \$4 Billion dollars.

The power struggle between innovation and stagnation is of critical importance to P&G and market research is the greatest asset in their arsenal. Their words in the 2009 Annual Report say it best.

"We conduct over 15,000 research studies every year. We invest more than \$350 million a year in consumer understanding. This results in insights that tell us where the innovation opportunities are and how to serve and communicate with consumers."

(P&G Annual Report, 2010)

If this is any indication of what we can expect in the future, I am confident that there will be more than 23 P&G billion-dollar brands across the globe with China and

India as key players. After all "*providing products and services of superior quality and value that improve the lives of the worlds consumer*" is the vision. (Malhotra, 2010)

MEASUREMENT AND SCALING PROCEDURES OF 2009 MAJOR TOOTHPASTE BRANDS BASED ON CONSUMER PREFERENCES

The process of measurement and scaling is assigning numbers or symbols to characteristics of objects according to pre-specified rules. (Malhotra, 2010) In the case of P&G we will be measuring and scaling 2009 major toothpaste consumer preferences based on preselected MS data. Both comparative and non-comparative scaling techniques will be used to develop a conclusion of the overall analysis.

The use of **comparative scaling** of 2009 major toothpaste brands will reveal rank, compare differences in MS intervals and indicate MS differences. (Malhotra, 2010) The first table below is an analysis of total consumer MS and includes comparative scaling data. The results of the findings are included in the conclusion portion of this research document. To compare brands with accuracy the use of Primary Scales of Measurement are included. (Ordinal and Ratio Scales)

Furthermore, **non-comparative scaling** examples are displayed in **TABLES 2 and 3** to provide a representation as to how an average consumer may rate a preferred brand of toothpaste. For the purpose of this assignment the brand leader; Crest Whitening Plus Scope is used as an example to measure consumer preference.

COMPARATIVE SCALING EXAMPLE

Comparative scaling measures the direct comparison of stimulus objects (2009 Toothpaste Brands) with one another. (Malhotra, 2010) The comparative scale examples provided within this document cover the use of ratio scaling as a Primary Scale of Measurement for a competitive market analysis. **Ratio scaling** is important as

it encompasses the properties of nominal, ordinal and interval scales. It essentially allows researchers to classify, rank, and compare intervals and differences within the object category. Thus, allowing us to accurately measure the order, distance and origin of data for 2009 Toothpaste Brand MS.

NON-COMPARATIVE SCALING EXAMPLE

Unlike comparative scaling, non-comparative scales measure the stimulus object (toothpaste brands) and is scaled independently of the other objects in the stimulus set. (Malhotra, 2010) This is uniquely important as non-comparative scaling measures consumer preference independently. Examples include:

- 1. Semantic Differential Scale** – A 7-point rating scale with endpoints associated with bipolar labels that have semantic meaning.
- 2. Likert Scale** – A 5-response scale that requires the respondents to indicate a degree of agreement or disagreement with each series of statements related to the stimulus object.

The Likert Scale used in this research document includes the use of Balanced Scaling to create an equal opportunity for favorable and unfavorable brand responses. (Malhotra, 2010)

RATIO SCALING OF 2009 TOOTHPASTE BRANDS

RANK ORDER SCALING		RATIO SCALE DIFFERENCES	
1	9%	10%MS	
2	8.20%		.8% MS DIFF. (1/2)
3	7.20%		.2% MS DIFF. (3/4)
4	7%		
5	5.70%		1.5% MS DIFF. (5/6)
6	4.20%		.2%MS DIFF. (T1012)
8	3.10%		.2%MS DIFF. (8/9)
9	2.90%		.5%MS DIFF. (T1315)
T10	2.40%		.1% MS DIFF. (16/17)
12	2.20%		
T13	2.10%		
15	1.60%		
16	1.30%		
17	1.20%		
			0%MS

Crest Whitening Plus Scope

Crest

Colgate Total

Colgate

Crest Pro-Health

Sensodyne/Colgate Max Fresh

Crest Whitening Expressions

Colgate Total Advanced Clean

Crest Extra Whitening/Aquafresh Extreme Clean

Colgate 2 in 1

Arm & Hammer Adv. White/Colgate Total Adv. Wh

Aquafresh

Sensodyne ProNamel

Orajel Toddler

TABLE 2

Non-Comparative Scaling Examples

Likert Scale

Instructions

Listed below are different opinions about Crest Whitening Plus Scope Toothpaste. Please indicate how much you AGREE or DISAGREE with each category.

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neither Agree or Disagree
- 4 = Agree
- 5 = Strongly Agree

<i>Crest Whitening Plus Scope</i>	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
I enjoy the texture of my toothpaste.	1				
I recommend my toothpaste to friends and family.			3		
The taste of Crest toothpaste is pleasing.				4	
My mouth feels clean after using Crest toothpaste.	1				
The price of Crest Toothpaste is fair.			3		
I would easily change brands if Crest were unavailable.			3		

TABLE 3

Semantic Differential Scale

Instructions

This section of the survey asks for your opinion based on your *TOOTHPASTE BRAND OF CHOICE*. Please mark an **X** in each category that you feel best measures your opinion.

TASTE		<i>Crest Whitening Plus Scope</i>					
Mild	:	:	X	:	:	:	Strong
Tasty	:	:		X	:	:	Tasteless
Sweet	:	X	:	:	:	X	Bitter
Minty	:	:	:	:	X	:	Tart

TEXTURE							
Gentle	:	:	:	:	X	:	Gritty
Smooth	:	:	X	:	:	:	Abrasive
Dry	:	:	:	:	X	:	Slimy
Soft	:	:	X	:	:	:	Hard

As we can conclude from the scaling and measurement samples above, both comparative and non-comparative techniques are unique to analyze different data. By

analyzing comparative data, we can measure the interval differences and MS changes from the brand leader (Crest Whitening Plus Scope) to the second and third place competitors.

RESULTS INCLUDE:

- Crest Whitening Plus Scope carries a .8% and 1.8% MS difference from Crest and Colgate Total respectively.
- Likewise, the MS difference from brand leader to 4th place Colgate is 2%; where as the difference from Colgate to 8th place is an interval difference of 3.9%.
- To continue the pattern, we find that from 8th place in MS to 12th is .9%.
- This statistically shows that the largest MS gaps are within brands 4 to 5. (1.3%)
- Finally, Constant Sum Scaling of competitive corporations shows us that of the 100% potential market, consumer behavior is in favor of Colgate-Palmolive (36.5%)

Constant Sum Scaling

OVERALL COMPANY RANKINGS	
<i>(BASED ON CONSUMER PREFERENCES)</i>	
Brand	MS% (%)
<i>Colgate-Palmolive</i>	<i>36.5</i>
<i>Procter & Gamble</i>	<i>35.5</i>
<i>GlaxoSmithKline</i>	<i>14.1</i>
<i>Church & Dwight Co. Inc.</i>	<i>9</i>
<i>Private label</i>	<i>0.6</i>
<i>Other</i>	<i>4.2</i>
Toothpaste Market	100%

Our non-comparative scaling examples provide insight as to what consumers "feel" about their toothpaste independently. For the purpose of this example we used

only the brand leader. Both the Likert Scale and the Semantic Differential Scale allow respondent characteristics to be measured by various degrees of agreement.

CONCLUSION

Overall the results of both scaling exercises uncover that consumers choose a brand of choice based upon individual emotion and comparative behavior. As P&G only trails Colgate by one MS point, the area of potential gain is within brands 4 to 8 displaying a 1.3% MS difference. By increasing brand strength in Crest Pro-Health, the shift of the market in consumer preference would favor P&G greatly.

Although P&G may outrank Colgate-Palmolive in overall revenues based on segmented brands of business. It is clear Colgate-Palmolive is leading the retail oral market in both the United States and Asia Pacific. Although only a 1% MS difference separates Colgate and P&G, this represents an overall \$11 million dollars in M.S. dollars. The next few years will be a tell tale sign if P&G can gather some momentum in both the United States and in emerging markets such as China and India

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