

**PLOTTING BRAND TRAJECTORIES WITH THE COMPETE PPM PACKAGE:
A MARKET SEGMENTATION ANALYSIS AND POSITIONING TOOL**

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ABSTRACT

The COMPETE PPM Package (Version LO) is used by competing participant teams in the marketing simulation COMPETE (Faria, Nulsen, and Roussos 1994) to generate a product positioning map (Kotler 1994) and to plot their own and competing brand trajectories. This product-positioning map enables a competing firm to identify which brands are in the premium, high-value, penetration or rip-off strategy quadrants and to formulate a coherent marketing strategy. The product-positioning map is used together with VALS psychographic profiles and psycho-geo-demo-graphic segmentation data concerning the target market to position their brands appropriately.

INTRODUCTION

The primary purpose of this paper is to introduce the COMPETE Product Positioning Map (PPM) package, a new personal computer (pc)-based marketing decision support tool that facilitates the integration of computers into the marketing curriculum. This package enables competing participant teams in the marketing simulation COMPETE (Faria, Nulsen and Roussos 1984) to apply their knowledge of market segmentation analysis and positioning in strategic market planning.

A key objective of business school education is to prepare students for decision-making responsibilities in their future careers. Principles and facts about various facets of business can be taught in the classroom. However, the ability to make decisions in a complex, dynamic, and uncertain environment is best learned through experiential learning. A growing number of marketing simulations, such as COMPETE,

provide students with the opportunity to apply their knowledge of marketing concepts and to practice and improve their decision-making skills.

The COMPETE PPM package is designed for use by competing participant teams in the COMPETE marketing simulation. This graphics application package has been tested and integrated successfully into the marketing curriculum at the University of Hawaii during the Fall 1995 semester. The objective of developing and integrating this decision support package into the marketing curriculum is to provide competing participant teams the opportunity to plan, implement, and control a marketing program for their portfolio of products (strategic business units).

MARKET SEGMENTATION ANALYSIS

Strategic marketing consists of segmenting, targeting and positioning. A market segment is a relatively homogeneous group of customers who will respond to a marketing mix in a similar way (Perreault and McCarthy 1996). Consumer markets are segmented by some researchers based on their geographic, demographic, and psychographic characteristics, and the needs or product responses of each segment are examined. Consumer markets are also segmented by researchers based on consumer responses to benefits sought, use occasions, or brands, in order to see whether different consumer characteristics are associated with each consumer-response segment (Kotler 1994).

Once the market segments are identified and evaluated, the company decides which target market/s (market segment/s) to serve, and uses either a single-target-market segmentation

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strategy, a multiple-target-market segmentation strategy, or a combined-target-market segmentation strategy (Perreault and McCarthy 1996). The company considers one of five patterns of target market selection: single-segment concentration, selective specialization, product specialization, market specialization, and full market coverage (Abell 1980).

Having segmented the market, and identified a target market, the company next endeavors to differentiate its offering from competitors' offerings, and positions its offer and image so that it occupies a distinct and valued place in the target customers' minds (Kotler 1994).

The first and most widely accepted syndicated psychographic segmentation system, the Values and Lifestyles Program of SRI International attempted to explain the substantial shifts in social values of the 1960s, and their potential effects on consumer behavior. VALS 2 was later developed with a sounder theoretical and methodological basis in order to avoid the criticisms of the original VALS program. The objective was to identify fundamental psychological orientations that underlie patterns of consumer preference and choice (Piirto 1991).

The COMPETE Product Positioning Map (PPM) package enables each of the competing participant teams in the COMPETE marketing simulation to generate a product positioning map for each of their own and competitor brands for each of the nine strategic business units. These product-positioning maps are used by the participant teams together with VALS psychographic profiles and psycho-geo-demographic data in market segmentation analysis and in positioning their brands.

THE COMPETE SIMULATION

COMPETE (Faria, Nulsen, and Roussos 1984) is a widely used marketing simulation designed to provide students with marketing strategy

development and decision-making experience. Competing participant teams are placed in a complex, dynamic, and uncertain environment. The participants experience the excitement and uncertainty of competitive events and are motivated to be active seekers of knowledge. They learn the need for and usefulness of mastering an underlying set of decision-making principles.

Competing teams plan, implement, and control a marketing program for three high-tech products in three regions within the United States. The features and benefits of each product and the characteristics of consumers in each region are described in the student manual. Based on a marketing opportunity analysis, a mission statement is generated, specific and measurable company goals are set, and marketing strategies are formulated to achieve these goals. Constant monitoring and analysis of their own and competitive performance helps the teams better understand their markets and improve their decisions.

Each decision period (quarter), the competing teams make a total of 73 marketing decisions as they market their three brands in the three regional markets. These decisions include 9 pricing decisions, 9 shipment decisions, 3 sales-force size decisions, 9 salesforce time allocation decisions, 1 salesforce commission decision, 27 advertising media decisions, 9 advertising content decisions, 3 quality-improvement R&D decisions, and 3 cost-reduction R&D decisions. Successful planning, implementation, and control of their respective marketing programs requires that each company constantly monitor trends in its own and competitive decision variables and resulting performance. Monitoring performance is facilitated by the use of Excel/ Lotus 1-2-3 spreadsheet, IFPS/Personal modeling language, and "C" graphics packages.

The COMPETE marketing simulation is used at the University of Hawaii at Manoa under-

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graduate (BBA), graduate (MBA), and post-graduate levels (Executive MBA Program and Pacific Asian Management Institute International Business Program). The primary objectives are to: (1) explore the key tools of marketing management, (2) improve analytical, decision-making, and communication skills, (3) accomplish group objectives through team work, and (4) apply the tool kit assembled and practice the skills developed.

In order to achieve the above objectives, the COMPETE marketing simulation is used to provide participants with the opportunity to: (1) learn strategic marketing concepts, (2) assemble a marketing tool kit, (3) use the tool kit to analyze marketing opportunities and performance, (4) prepare and submit periodic written reports on the use of marketing tools, and (5) present group objectives, strategies, and performance, at the end of the semester using the marketing tool kit assembled.

During the course of the simulation, the competing teams learn and apply key marketing concepts and marketing decision-making tools. These marketing decision-making tools and concepts include (1) market segmentation analysis, (2) positioning, (3) sales analysis, (4) cost analysis, (5) performance analysis, (6) break-even analysis, (7) sensitivity analysis, (8) regression analysis, (9) product lifecycle analysis, and (10) product portfolio analysis. They use pc-based graphics packages to present (1) product position maps, (2) growth share matrices, and (3) growth gain matrices for themselves and their key competitors. These charts are used by the participant teams in analysis, decision-making, report submission, and class presentation.

THE COMPETE PPM PACKAGE

The COMPETE Product Positioning Map (PPM) package is a pc-based marketing decision support tool that exposes participant teams to the use of

product positioning maps in market segment analysis and positioning. This pc-based marketing decision support system is written in Borland's Turbo C Version 2.01 programming language. This package will work on a 386+ computer with MS-DOS 5.0+ operating system. The program requires 450k of CPU random access memory (RAM) and a VGA color monitor.

Participant teams input data on (1) price and (2) quality index for each product in each region for their own firm and for each of their competitors. Based on this data, the COMPETE PPM Graphics Package. Based on the price and quality index inputs entered, the COMPETE PPM Graphics Package generates the product positioning map on the VGA color monitor. Participant teams may use the COMPETE PPM Package to obtain hardcopy (printed output) of the product positioning map.

The product positioning map displays may be generated for each of the nine strategic business units (product-region combinations) at the end of the first, second and third year of operations. Based on these displays, the participating teams can visually check their brand positions relative to competing brands. Next, they use market segmentation analysis including VALS psychographic profiles and data to identify their target markets, understand their media and purchase behavior, and position their brands appropriately.

Hardware and Software Requirements

The COMPETE Product Positioning Map (PPM) package requires the following system components and characteristics:

1. A 386+ computer.
2. MS-DOS 5.0+ operating system.
3. 450k of CPU random access memory (RAM).
4. A VGA color monitor.
5. The COMPETE (Borland Turbo C) PPM Version 1.0 Graphics Disk.

6. Output data from four or more sessions of the COMPETE game, and
7. A laser or deskjet printer for printing the graphic display generated.

The data generated by the marketing simulation game COMPETE are rich enough to enable the participant teams to use several marketing concepts and key decision-making tools. These include (1) market segmentation analysis, (2) breakeven analysis, (3) contribution to margin analysis by product and by region, (4) proforma analysis, (5) sales forecasting using trend analysis and multiple regression analysis, (6) performance and cost analyses with respect to objectives and competition and over time, (7) product portfolio analysis using the GSM and the GGM, and (8) sensitivity analysis using the IFPS/Personal "What If" and "Goal Seek" commands. These marketing concepts and decision-making tools are used by the participant teams to plan, implement, and control their marketing programs. The phases of the marketing management process, in which each marketing concept or decision-making tool is employed, are identified in Table 1.

CONCLUSION

The COMPETE Product Positioning Map (PPM) package is a simple yet powerful pc-based decision support tool that may be used in market segmentation analysis and positioning by the decision maker. It may be used by competing participant teams to analyze, plan, implement and control their marketing program. This package will permit participant teams to perform a higher level of marketing analysis with a lower level of effort. Specifically, the participant teams will spend substantially less time in entering the data and generating the product positioning map displays, and considerably more time in analyzing the target markets and positioning their brands relative to competing brands in the consumer mind.

However, this decision support tool is designed to assist the marketing manager in the decision-making process and is not a substitute for it. In the final analysis, a successful marketing program is the result of a well-conceived marketing strategy, a balanced marketing mix directed toward a target group of consumers, and the careful implementation of pricing, promotion, distribution, and production policies.

**TABLE 1
MARKETING ANALYSIS**

Tool	Plan	Implement	Control
Situation Analysis	XX	X	
Mktg. Opp. Analysis	XX	X	
Positioning	XX	X	
Sales Analysis		X	XX
Cost Analysis		X	XX
Performance Analysis		X	XX
Breakeven Analysis	XX	X	
Mkt Segment Analysis	XX	X	
VALS Analysis	XX	X	
Proforma Analysis	XX		XX
Regression Analysis (sales forecasting)	XX	X	
Prod Lifecycle Anal.	XX	X	
Prod Portfolio Anal.	XX		XX

Index to Symbols:
 XX Used heavily
 X Used moderately

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