Marketing Strategy:
Based on First Principles and Data Analytics

Data Analytics Case 3
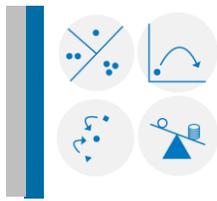
New Product Development With Conjoint Analysis at MobilMax Inc.[1]

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Background

Founded in 2006 in Bangalore, India, MobilMax Incorporated (MOIC) is one of India's leading mobile phone and tablet manufacturer. The company has more than 10,000 employees and in 2010 became known as a technology pioneer by introducing affordable tablets with phone capabilities.

The move helped MOIC win an approximately 75% market share in the tablet category. Not only could MOIC's tablets take and place calls, the product design and other characteristics were equal to or better than competitors. Third party research firms ranked MOIC's brand equity among the highest.

However, 2012 brought drastic changes in demand for tablets in India and across the globe. A number of foreign companies, such as Xiomi, Oneplus, and Gionee, entered the Indian market with a variety of offerings at low prices. With massive economies of scale from factories in China, Gionee and Xiomi could enter India as cost leaders. MOIC's market share dropped to 53% in two years. The international competitors also advanced on product design and offered customers more options for customization, which led to a further erosion of MOIC's market share.

In early 2015, MOIC's sales director, research and development director, and marketing research director gathered to plan a new product for 2016 that could win back customers. The directors had different opinions regarding what features would matter the most. The sales director advocated a 15% reduction in price to match the major competitors. His team reported experience with customers exhibiting reservations about MOIC's higher priced products. The research and development team believed customers would be willing to pay higher prices for better battery life and lighter weight. The latest prototype achieved these product improvements, but the price would need to remain relatively high. The marketing research director was opposed to both recommendations. In the past, MOIC had used plastic materials, and he felt a shift to metal or silicon was necessary to win over customers with a more elegant design and appearance.
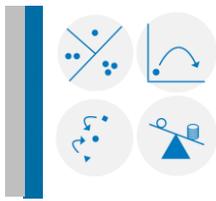
MOIC wanted to maintain perceptions of quality and margins but also be more competitive on price. But none of its department directors had enough solid data to support their beliefs.

Problem Statement

Competitors react to customers' unmet needs. Failing to understand how these evolving needs work in concert with new offerings from competitors can threaten even a strong brand. As discussed in Chapter 4, market-based sources of sustainable competitive advantage (SCA) can be grouped into three main categories: Brand, offerings, and relationships.

Firms such as MOIC have built some SCA from past success, which provides more leeway and time to catch up to competitors that enter the market with desirable offerings. However, MOIC's brand, existing consumer habits, and channel relationships can only sustain the company for so long. MOIC must catch up to competitors before it is too late.

Providing a new product at a lower price could alter how MOIC's brand is perceived in the marketplace. If it loses its advantages on key product attributes, perceptions of elite quality will fade regardless of price, and brand equity will fall as perceptions of its core offering begin to reflect the reality of a more competitive landscape with less product differentiation. By developing a product with longer battery life and lightweight design or with better materials for a more pleasing design, MOIC could increase its offering equity and affirm its brand equity.

MOIC has advantages in terms of its relationship equity because it understands local retailers and Indian culture. Relationship marketing efforts seek to create shared history, knowledge, and experiences with partners such that communal norms govern the exchange, and trust and commitment lead to loyalty. Continuing to offer innovative products and improving aftersales support would help MOIC grow closer to retail partners and make end-users more familiar with its offerings. Tech companies benefit from user data and incorporate learning and customization to providing a better experience, which in turn builds loyalty and relieves competitive pressure. Offering lower prices tin the short term could help MOIC acquire and maintain relationships with customers that could be capitalized in the future.

To maintain and further its SCA, MOIC decided to apply a scientific and customer-oriented approach to its new product design. The company would use market feedback from customers to help launch the product. MOIC used a survey to facilitate a conjoint analysis that would help it launch a product that satisfied the most important customer needs.

Data

MOIC surveyed a sample of 20 customers regarding the importance of five key attributes: Price, size, weight, battery life, and material. Table 1 presents a summary of the results. All 20 customers
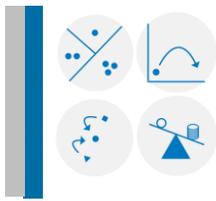
were asked to rate the importance of each attribute on a scale of 1 to 7, where 1=not important at all and 7=very important, in terms of making a tablet desirable.

Price was rated as the most important attribute (mean=6.7), followed by battery life (mean= 6.6), size (mean=6.5), weight (mean=6.3), and material (mean=6.1). The findings were not very helpful. Since all the scores were high, little insight was gained regarding what to prioritize in MOIC's new product.

Next, MOIC employed a conjoint analysis, an approach that can reveal trade-offs among product attributes. The basic assumption of conjoint measurement is that customers cannot reliably express how they weight separate features of a product when forming preferences. However, the relative importance weights can be inferred after asking customers for their evaluations of various product concepts that slightly differ in attributes. Through a structured process, a conjoint analysis identifies the critical values of attributes that provide the greatest benefit to a customer and other less critical attributes.

In hypothetical surveys, most customers say they want the best version of all features—low price and highest performance. But when they make a purchase decision, a few features really make the difference.

When MOIC develops a new tablet, it must decide what to emphasize in the product and promotional messaging. Conjoint allows for a simulation of the trade-off: Would you rather have better materials, more battery life expectancy, or lower price? The trade-offs reflect how customers actually make decisions given products in the marketplace that face constraints. Few customers can afford high priced products that offer the best options for all attributes. During a conjoint exercise, rather than directly asking customers about each attribute independently, buyers evaluate alternative product profiles and analysis of their evaluations reveals what matters most.

MOIC specified multiple attribute combinations it wished to test in conjoint scenarios. The company chose to have products evaluated that reflected options from four possible levels of battery life (4 hours, 6 hours, 8 hours, or 10 hours), exterior materials (ceramic, plastic, metal, or silicon), weights (0.5 lbs., 1 lb., 1.5 lbs., or 2 lbs.), sizes (7 in., 8 in., 9 in., or 10 in.), and price (5,000INR, 8,000INR, 10,000INR, or 12,000INR). Next, MOIC used conjoint modelling to identify the 25 products, with slight variations across the product attributes, which they could have customers evaluate. The company wished to obtain customers' overall evaluations of the potential products in a systematic way such that the evaluations could be decomposed into the "part-worth" value each customer attaches to the attributes.

In the actual conjoint task, each customer was asked to rate each of the 25 product bundles on a 7-point scale, where 7 represented a perfect product they would definitely purchase. By providing ratings on a bundle of product attributes, consumers would better indicate the value
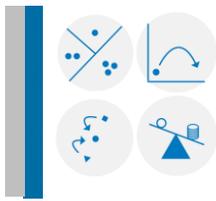
they placed on each individual attribute. Table 2 provides the product attribute mix; Table 3 shows the 25 product bundles.

Questions

1) Based on the "part-worth" across each attribute (Table 4), which is the most preferred level (option)?

2) Which attribute is most important to the purchasing decision?

3) What pricing and product design recommendations would you make to maintain and extend MOIC's SCA based on the results of the conjoint analysis?
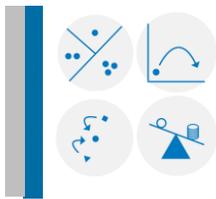
Table 1. Attribute Survey Results

Product Attribute	Mean Importance Rating
Price	6.7
Battery Life	6.6
Size	6.5
Weight	6.3
Material	6.1

Table 2. Attribute Design Matrix

Attributes / Levels	Level 1	Level 2	Level 3	Level 4
Price	5,000INR	8,000INR	10,000INR	12,000INR
Size	7 in.	8 in.	9 in.	10 in.
Weight	0.5 lbs.	1 lb.	1.5 lbs.	2 lbs.
Battery Life	4 hours	6 hours	8 hours	10 hours
Material	Ceramic	Plastic	Metal	Silicon
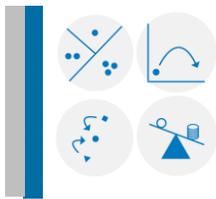
Table 3. Product Bundles

Attributes / Bundles	Bundle 1	Bundle 2	Bundle 3	Bundle 4	Bundle 5	Bundle 6	Bundle 7	Bundle 8	Bundle 9	Bundle 10
Price	5,000	5,000	5,000	5,000	5,000	8,000	8,000	8,000	8,000	8,000
Size	7 in.	8 in.	9 in.	10 in.	7 in.	7 in.	8 in.	9 in.	10 in.	7 in.
Weight	0.5 lbs.	1 lb.	1.5 lbs.	2 lbs.	0.5 lbs.	1 lbs.	1.5 lbs.	2 lbs.	0.5 lbs.	0.5 lbs.
Battery Life	4 h	8 h	4 h	6 h	10 h	6 h	10 h	4 h	8 h	4 h
Material	Ceramic	Silicon	Plastic	Ceramic	Metal	Plastic	Ceramic	Metal	Ceramic	Silicon

Attributes / Bundles	Bundle 11	Bundle 12	Bundle 13	Bundle 14	Bundle 15	Bundle 16	Bundle 17	Bundle 18	Bundle 19	Bundle 20
Price	10,000	10,000	10,000	10,000	10,000	12,000	12,000	12,000	12,000	12,000
Size	7 in.	8 in.	9 in.	10 in.	7 in.	7 in.	8 in.	9 in.	10 in.	7 in.
Weight	1.5 lbs.	2 lbs.	0.5 lbs.	0.5 lbs.	1 lb.	2 lbs.	0.5 lbs.	0.5 lbs.	1 lb.	1.5 lbs.
Battery Life	8 h	4 h	6 h	10 h	4 h	10 h	4 h	8 h	4 h	6 h
Material	Metal	Ceramic	Silicon	Plastic	Ceramic	Silicon	Plastic	Ceramic	Metal	Ceramic

Attributes / Bundles	Bundle 21	Bundle 22	Bundle 23	Bundle 24	Bundle 25
Price	5,000	5,000	5,000	5,000	5,000
Size	7 in.	8 in.	9 in.	10 in.	7 in.
Weight	0.5 lbs.	0.5 lbs.	1 lb.	1.5 lbs.	2 lbs.
Battery Life	4 h	6 h	10 h	4 h	8 h
Material	Ceramic	Metal	Ceramic	Silicon	Plastic
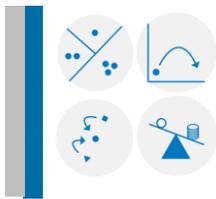
Table 4. Part-Worth Means Across Respondents

Attributes / Levels	Level 1	Level 2	Level 3	Level 4
Price	5,000	8,000	10,000	12,000
Part-worth	1.28	0.8	0.34	0
Size	7 in.	8 in.	9 in.	10 in.
Part-worth	-0.1	0.061	-0.057	0
Weight	0.5 lbs.	1 lb.	1.5 lbs.	2 lbs.
Part-worth	-0.032	0.0044	-0.172	0
Battery Life	4 h	6 h	8 h	10 h
Part-worth	-0.59	-0.2	-0.31	0
Material	Ceramic	Plastic	Metal	Silicon
Part-worth	-0.79	-0.14	-0.13	0