Target Costing

2/24/00

Reason for this lecture

- Understanding cost/price issues in your product is critical to the overall success
- How to do Target Costing for a re-design
- How to do Target Costing for a new design
- Pricing -- what are the key drivers?
- Assignment
  - You will need to enumerate/quantify the price point issues
  - You will need to create a preliminary target costing scheme.
Several Parts to Target Costing

- Setting Price
- Setting Profit
- Setting Cost

Past approach

- Cost plus
- Use volumes to reduce costs
- Depend on TTM advantage to capture lead users
- Engineering sets function/value
- Cost targets not adhered to
Sources of cost

- **Fixed cost**
  - Design
  - Technology
  - R&D
- **Semi-fixed cost**
  - Capital equipment -- number of machines dependent on volume
- **Incremental/recurring costs**
  - Each additional product increased the total incremental costs by one unit
  - Material, labor etc.

Key to pricing & target costing

- **Relative price/value perception of the customer**
- **What is the base price of a product**
- **What features does the product have that add value to the customer at a reasonable price**
- **The value is set by the consumer and the other competitors**
**Target costing process**

- Understand customer
  - What is the price sensitivity
  - What are the value of features
  - What price
  - What features
  - Set profit
  - Set cost targets
  - Design to cost

- What is the cost structure of other product (yours and others)

**Price sensitivity effects**

- **Perceived Substitutes**
  - Locktite is a substitute for bolts
- **Unique Value**
  - Cross-Pad
- **Switching Cost**
  - Boeing to Airbus (maintenance)
- **Difficult Comparison**
  - Unique pricing schedules (brokers)
  - Generics/noname brand
- **Price-quality**
  - Price as a signal of quality (Rolls-Royce)
Price effects

- Expenditure
  - income/expenditure
- End-Benefit - part of another function
  - sensitive to overall product cost/function
  - sensitive to the contribution to the total
- Shared-Cost
  - Someone else buying the product
- Fairness
- Inventory
  - ability to hold an inventory
  - short-term vs. long-term price fluctuations

Competitive comparison

<table>
<thead>
<tr>
<th>Positive Differentiation Value</th>
<th>Negative Differentiation Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference Value</td>
<td>Total Economic Value</td>
</tr>
</tbody>
</table>
**Feature sets**

- Price is not a linear function of every feature
- \( P_x = \) price a customer is willing to pay for an additional feature

\[ \begin{align*}
&\text{Willing to pay full price} \\
&P_x \\
&\text{discount or budget} \\
&\text{Number of other features purchased}
\end{align*} \]

Use conjoint analysis to elicit the “utility” of each feature

**Price Elasticity**

- Sensitivity of people’s purchase to a change in price
- \( E = \frac{\% \text{ change in unit sales}}{\% \text{ change in price}} \)
- Hard to calculate or generalize
- Function of
  - Market share
  - Product Difference
  - Price/quality point
  - Product
Toyota Case

- What is the process of Target Costing
- Normalize 1998 costs to 1999 conditions
- Select price for base product, volumes, and profit
- Identify the total, “real” cost reductions required
- Allocate the reductions between departments

What data do they need

- Price target for base car
- Elasticity
- Cost structure for every part
- Price sensitivity for features
- Cost of every feature
- Where cost can be removed (what is reasonable)
- Fixed costs -- molds and other equipment
### What enables Toyota to do this well

- Strong costing department
- Lots of historical data
- Design doesn’t change
- Competitive Data
- Flexible architecture -- can change out features
- Strong cross-functional interactions
- Part sharing for reduced cost

### TC for new products

- No existing product
- Don’t clearly understand customer needs/wants
Solutions

• Tools
  – Tear down of similar products
    • What % of cost should go to the memory/LCD/process or etc
  – Value analysis
    • What value does each feature have, how much are you willing to spend to add an additional feature

• Real Options
  – Maintain flexibility in the product architecture (i.e., allow final feature set to be flexible)
  – Important where customer needs are unknown

Real options

• The amount you pay to have an option to include a feature/new technology etc.
• Additional costs
  – product development resources
  – flexibility to add/remove features

| Expected Profit | Change in optimal feature set from original predictions |
Summary

• Need a good understanding of value
• Need to understand part cost structure for yours and other costs
• Need to work with suppliers to enable long term cost reductions

Reading

• EMI & CT Scanner (HBS #9-383-194)