Cannibalization

This module covers the concepts of cannibalization and fair share draw.

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Marketing Metrics Reference: Chapter 4

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What Is Cannibalization?

Cannibalization is a marketing concept that acknowledges the fact that new product growth is often gained at the expense of existing products.

This tutorial will examine cannibalization and the concept of fair share draw as applied to cannibalization or a new competitive entry into a market.
Cannibalization pertains to relative changes in market share within a company’s product line.

For example, if Molar’s Toothpaste Company introduced a new ‘whitening’ toothpaste in addition to its regular brand, it is likely that part of the whitening toothpaste’s sales would come from customers who used to buy the regular brand.

This amount can be estimated prior to launch to provide an idea of how the product line contribution as a whole will change.

**Insight**

While the impact of cannibalization is often discussed at an initial launch of a product or line extension, it should also be revisited when products are redesigned or marketing plans changed.
Cannibalization Example

Lois sells beach umbrellas on a small beach where she is the only provider. Her financials for last month were:

- Umbrella Sales Price: $20
- Variable Cost per umbrella: $10
- Unit Contribution: $10
- Total Monthly Sales: 100 sales

**Regular Umbrella Total Monthly Contribution:** $1,000

Lois is planning on introducing a bigger, lighter-weight umbrella called the “Big Block” next month. Its projected financials are as follows:

- Big Block Sales Price: $30
- Variable Cost per Big Block: $15
- Unit Contribution: $15
- Total Monthly Sales: 50 sales

**Big Block Total Monthly Contribution:** $750

**Question 1:**

Should Lois expect her total contribution to be $1750 ($1,000 + $750) next month?
Answer:
It is highly unlikely that Lois’ total contribution would be that high ($1750). What will most likely happen is that a portion of the people most likely to buy the regular umbrella (were it the only option) would instead opt to purchase the Big Block umbrella.

Definition

**Cannibalization Rate**: the percentage of a new brand or modification that come from an existing brand’s sales.

\[ \text{Cannibalization Rate} = \frac{\text{Regular brand purchasers opting for new brand}}{\text{Total new brand sales}} \]

Question 2:
If Lois thought that her cannibalization rate would be 60%, what would be her total monthly contribution?
<table>
<thead>
<tr>
<th><strong>Recall:</strong></th>
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<tbody>
<tr>
<td><strong>Last month:</strong></td>
<td></td>
</tr>
<tr>
<td>Sales Price = $20</td>
<td></td>
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<tr>
<td>Var. Cost = $10</td>
<td></td>
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<tr>
<td>Unit Cont. = $10</td>
<td></td>
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<tr>
<td>Total sales = 100</td>
<td></td>
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<tr>
<td>Monthly Cont. = $1000</td>
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<tr>
<td><strong>Projected Big Block:</strong></td>
<td></td>
</tr>
<tr>
<td>Sales Price = $30</td>
<td></td>
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<tr>
<td>Var. Cost = $15</td>
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<tr>
<td>Unit Cont. = $15</td>
<td></td>
</tr>
<tr>
<td>Total sales = 50</td>
<td></td>
</tr>
<tr>
<td>Monthly Cont. = $750</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Answer:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>If 60% of Lois’ Big Block sales come from the regular umbrella, that means regular umbrella sales will be:</td>
<td></td>
</tr>
<tr>
<td>Big Block Sales:</td>
<td>50 sales</td>
</tr>
<tr>
<td>Cannibalization rate:</td>
<td>60%</td>
</tr>
<tr>
<td>Regular umbrella sales lost:</td>
<td>30 (= 50 x 60%)</td>
</tr>
<tr>
<td>New regular umbrella sales:</td>
<td>70 (= 100 – 30)</td>
</tr>
</tbody>
</table>

…and her total contribution will be:

New Regular Total Contribution: $700 (70 sales x $10)
Big Block Total Contribution: $750 (50 sales x $15)
Lois’ Total Monthly Contribution: $1450
Total umbrella sales have increased from 100 to 120, and total contribution has increased from $1000 to $1450.

The key to this is that Lois has replaced 30 regular sales with 30 Big Block sales with a higher unit contribution, and additionally sold 20 more Big Blocks at the higher contribution.

Note that even if total sales had remained the same (meaning that all of Big Block sales came from the regular umbrellas), overall contribution would have increased due to the improved margins of the new umbrellas.

**Insight**

Sometimes, due to market pressures, new products may have a lower unit contribution and it's possible for total contribution to actually decrease!
Another way to solve this problem would be to calculate a *weighted contribution margin*. To do so is to calculate the net change in total contribution Lois would receive after the introduction of Big Block.

### Answer:

Big Block Sales: 50

Cannibalization Rate 60%

Regular Umbrella Unit Contribution: $10

“Cannibalized” Regular Unit Contribution: $6 (= 60% x $10)

Big Block Unit Contribution: $15

**Weighted** Big Block Unit Contribution: $9 (= $15 - $6)
Using this weighted Big Block unit contribution figure will enable the computation of the marginal benefit (or harm) that Big Block will cause to Lois’ total contribution.

**Answer (con’t):**

<table>
<thead>
<tr>
<th><strong>Marginal Big Block contribution:</strong></th>
<th>$450 (50 units x $9 weighted margin)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Original Regular Umbrella Total Contribution:</strong></td>
<td>$1,000 (100 sales x $10)</td>
</tr>
<tr>
<td><strong>Lois’ Total Monthly Contribution:</strong></td>
<td>$1450</td>
</tr>
</tbody>
</table>

This yields the same result as the previous equations. Were the weighted margins to yield a negative number, this would indicate that the total monthly contribution would decrease, and the new product introduction should probably be cancelled.
**Fair share draw** can be used to calculate market share for competitive entry as shown in the following example:

Lois’ brother Larry thinks the Big Block is a good idea and wants to sell it at a busier beach where there is already established competition. Umbrella sales at ‘Busy Beach’ last month were:

- Sue: 400 sales, 80% share
- Dave: 100 sales, 20% share
- Total: 500 sales, 100%

Larry doesn’t believe more than 500 umbrellas will be sold at Busy Beach each month, but he is confident that he can capture a 10% market share with Lois’ Big Block umbrella.

**Question 3:** Assuming ‘Fair Share Draw,’ what will be the new distribution of market shares at Busy Beach?
Competitive Entry Fair Share Draw

Answer:

‘Fair Share Draw’ assumes that a new entrant to a marketplace will take share from his competitors in direct proportion to their existing market shares. Total market remains at 500 sales.

That means that Larry will take:

From Sue: 80% market share x 500 total sales x 10% cannib. rate = 40 sales
From Dave: 20% market share x 500 total sales x 10% cannib. rate = 10 sales

Therefore, the new market shares will be:

Sue: 400 – 40 = 360 sales, 72% market share
Dave: 100 – 10 = 90 sales, 18% market share
Larry: 50 sales, 10% market share
Further Reference