

Review Question on Impact Analysis of changes in market share and size on the firm's sales

Ted Mitchell

How to Measure the Change in Our Quantity Sold Due to the Individual Changes in Market Share and Market Size

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Basic Relationship

- Our Sales = (Market Share) x (Market Size)
in Units Sold
- 20,000 units = 20% (100,000 units)
or in Revenues
- \$50,000 = 25%(\$200,000)

Analysis of Changes

- Change in Sales from period to period equal
the changes in Market Share and the
changes in Market Size
- Quantity in period 4 - Quantity in period 3 =
Impact due to Δ Share plus Δ Size of Market

Observing Change from period to period

- The quantity sold in period 4 has increased
from period 3.
- Is the increase is due to a change in your
market share or due to a growth in the
market?

Observed Changes

	Period 3	Period 4	Change
Market Size (units)			
Market Share			
Units Sold	14,400	15,000	+600 units

Observed Changes

	Period 3	Period 4	Change
Market Size (units)	120,000	150,000	+30,000
Market Share	12%	10%	-2%
Units Sold	14,400	15,000	+600 units

Observed Changes

	Period 3	Period 4	Impact of Change In Units
Market Size (units)	120,000	150,000	+30,000
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Observed Changes

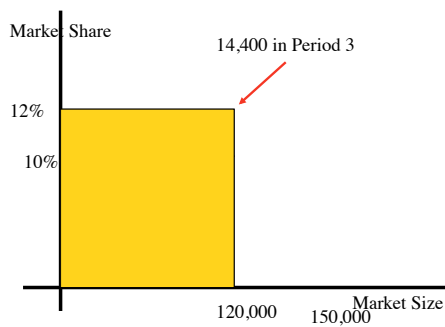
	Period 3	Period 4	Impact of Change In Units
Market Size (units)	120,000	150,000	+30,000 $10\% (30,000) = 3,000 \text{ units}$
Market Share	12%	10%	-2% $120,000(-2\%) = -2,400$
Units Sold	14,400	15,000	+600 units

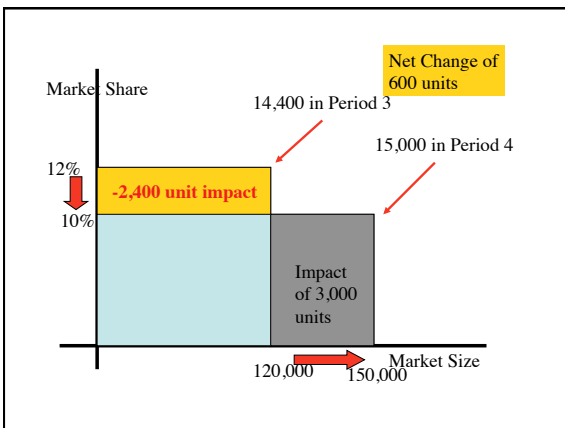
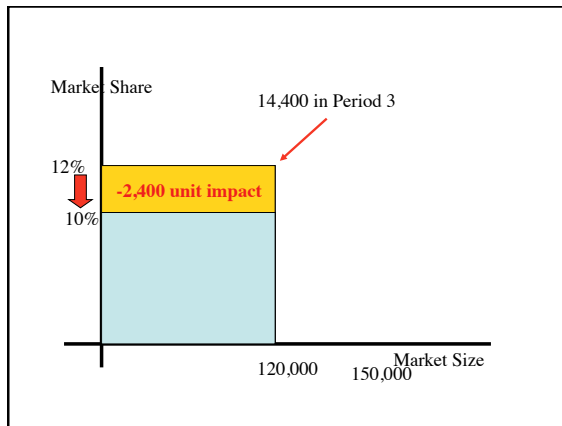
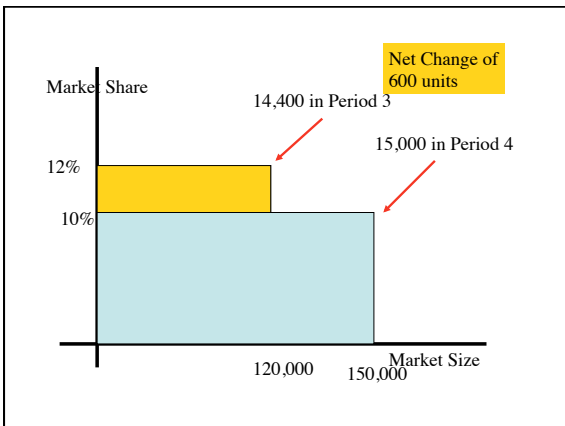
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Graphical Example

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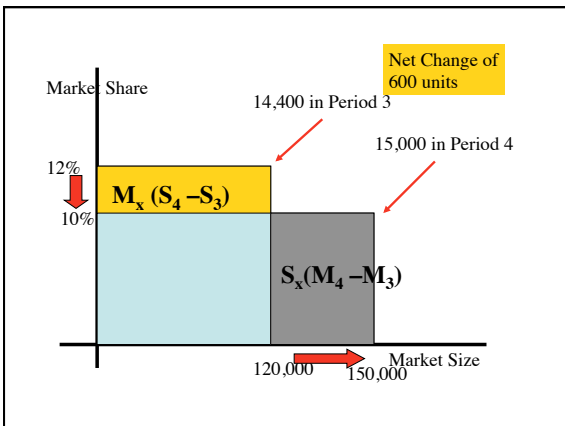




Volume Change Has Three Impacts

- $Q_4 - Q_3 = S_x(M_4 - M_3) + M_x(S_4 - S_3) + r$
where
 - $Q_4 - Q_3$ = Change in Our Units Sold
 - 1. $S_x(M_4 - M_3)$ = Impact due to deviation in Market Size
 - 2. $M_x(S_4 - S_3)$ = Impact due to deviation in Market Share
 - 3. r = Joint Impact not explained by individual deviations in market size and market share

Subscripts 4 = period 4, 3 = period 3, x = minimum value of period 3 or period 4

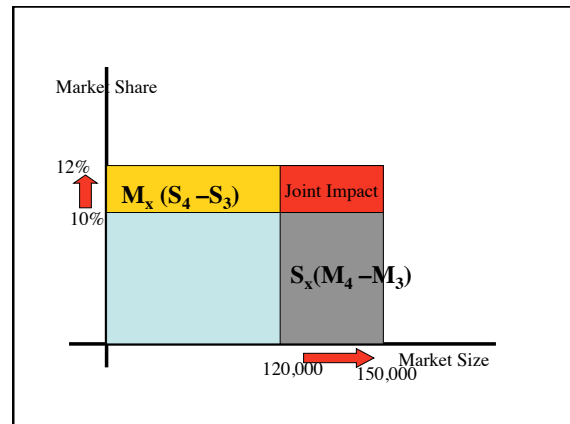


Volume Change Has Three Impacts

- $Q_4 - Q_3 = S_x(M_4 - M_3) + M_x(S_4 - S_3) + r$
where
 - $15,000 - 14,400 = 10\%(150,000 - 130,000) + 130,000(10\% - 12\%) + 0$
 - $Q_4 - Q_3$ = Change in Our Units Sold
 - 1. $S_x(M_4 - M_3)$ = Impact due to deviation in Market Size
 - 2. $M_x(S_4 - S_3)$ = Impact due to deviation in Market Share
 - 3. r = Joint Impact not explained by individual deviations in market size and market share

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If Both Change in the Same Direction You get a Joint or Residual Impact



Residual

- For identifying relative importance of a specific change the joint impact is not important
- For rewarding changes in performance allocate the joint variance to the two primary impacts in the same proportion as the primary impacts.

Any Questions?