

Marketing Analytics II

Chapter 11: Sales Analytics

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Outline/ Learning Objectives

Topic	Description
Consumer Sales Process	Analyzing the consumer sales process for insight
ECommerce Sales Model	Calculating online sales campaign effectiveness
Sales Metrics	Evaluating sales performance in multiple areas
Profitability Metrics	Assessing gross margin using profitability metrics
Support Metrics	Measuring support performance

Consumer Sales Process

Sales Step	Description	Survey Metric	Marketing Actions
Problem Description	Consumer recognizes problem and wants to solve it	Identified applications for product or service	Consumer advertising to show how product solves problem
Information Search	Consumer gathers information to make decision	Sources of information	Distribution of relevant information to multiple venues
Evaluation of Alternatives	Consumer judges different alternatives	Beliefs, attitudes, and decision criteria	Framing of problem to benefit company
Purchase Decision	Consumer decides on specifics of the purchase	Brand, dealer, quantity, timing, and payment method	Purchase attributes and purchase experience
Post-purchase Behavior	Consumer wonders if they made the right choice	Satisfaction and likelihood to recommend to others	Follow-up actions to assure consumer

5 Steps in Consumer Sales Process

Consumer Sales Process

SURVEY	
Part 1	
Topic 1: Rating.....	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Topic 2: Answer:	_____
Topic 3: Selection	<input type="checkbox"/> A <input type="checkbox"/> B
Part 2	
Topic 4: Rating.....	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Topic 5: Answer:	_____
Topic 6: Selection	<input type="checkbox"/> A <input type="checkbox"/> B
Part 3	
Topic 7: Rating.....	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Topic 8: Answer:	_____
Topic 9: Selection	<input type="checkbox"/> A <input type="checkbox"/> B

Step 1: Problem Description

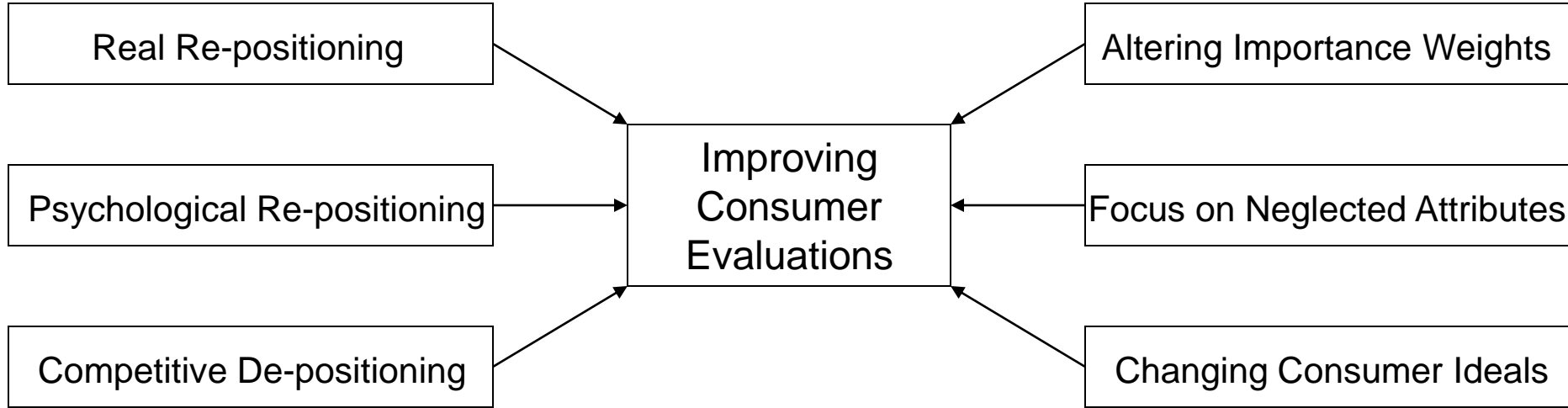
Survey to Gather Information on Usage Scenarios/ Associations

Consumer Sales Process

Topic	Description
Personal	Individuals known by consumer Examples: Friends and acquaintances
Commercial	Information provided by companies Examples: Websites and advertising
Public	Material from mass media and rating organizations Examples: Magazines and television
Experiential	Feedback from direct trial of product or service Test drive at dealer

Step 2: Information Search

Consumer Sales Process



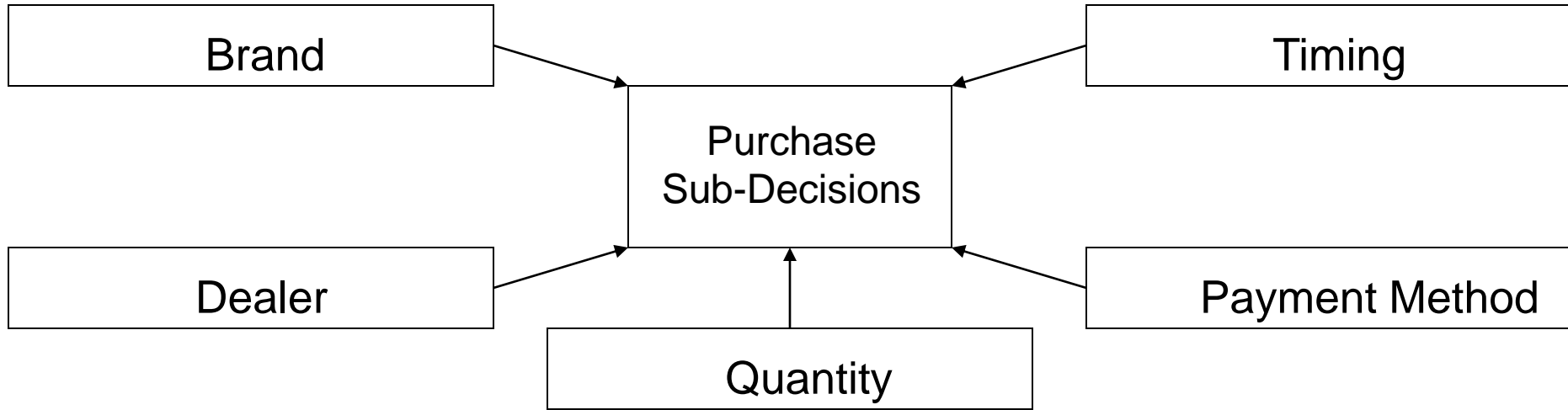
Step 3: Evaluation of Alternatives

Consumer Sales Process

Method	Description	Example
Real Re-Positioning	Redesign existing products and services to make them better suited to consumers	Physical changes in design of motorcycle
Psychological Re-Positioning	Alter beliefs about the product, service, or brand	Advertising campaign advocating female ridership
Competitive De-positioning	Change beliefs about competitors' brands	Comparison charts contrasting performance of different brands
Altering Importance Weights	Focus attention to areas where brand excels	Emphasis on superior fuel economy
Focusing on Neglected Attributes	Direct attention to important areas not often considered	Benefits of low seat height
Changing Consumer Ideals	Change ideal level for certain attributes	Define new "standard" for ideal weight for entry-level motorcycles

Step 3: Evaluation of Alternatives

Consumer Sales Process



Step 4: Purchase Decision

Consumer Sales Process

Sub-Decision	Description	Example
Brand	Narrowing down list of top brands to consider	Deciding on Honda brand due to strong brand reputation
Dealer	Selecting channel from which to purchase item	Purchasing new motorcycle from nearby dealer for easy servicing
Quantity	Determining quantity to purchase, along with accessories	Selecting extended warranty for peace of mind with new machine
Timing	Evaluating functional risk, financial risk, social risk, and psychological risk in consideration of postponing decision	Postponing purchase of new motorcycle until after completion of Motorcycle Safety Foundation (MSF) Basic Rider Course
Payment Method	Selecting method of payment	Paying with dealer financing

Step 4: Purchase Decision

Consumer Sales Process

Topic	Description
After Sale	Consumers continue to evaluate purchase after sale
Urgent	Many products/services come with 30 day return period Must decide quickly if they like it or not
PPD	Post-Purchase Dissonance Conflict between initial assessment and actual ownership
Satisfaction	Companies take active steps to assess satisfaction Surveys to gauge attributes, quality, experience, overall Seek to understand “tipping point”

Step 5: Post-Purchase Behavior

Ecommerce Sales Model

INPUTS

Sales forecast →
Average revenue per order →
Segment sales split →
Campaign sales split →
Campaign conversion rate →
Cost per response →

Ecommerce
Sales Model

OUTPUTS

Sales predictions by segment →
Budget requirement →
Spend/Sales ratio →

Model to Estimate Sales for Ecommerce Campaigns

Ecommerce Sales Model

Input	Description	Example
Sales Forecast	Amount of sales revenue expected to be made in next year	“We expect to generate \$40,000 in sales next year”
Average Revenue/Order	Average revenue generated per order; also called Order Size	“The average customer spends \$1,000 per order”
Segment Sales Split	Percentage of sales per market segment	“Segment A accounts for 30% of overall sales”
Campaign Sales Split	Percentage of sales per marketing campaign	“Social media campaigns account for 25% of overall sales”
Campaign Conversion Rate	Ratio of sales to campaigns for different marketing campaigns	“PPC campaigns result in one sale for every 100 clicks, a 1% conversion rate.”
Cost per Response	Average marketing spend per prospect response	“Our social networking program costs us about \$2.00 to get a response from a prospect”

Model Inputs

Ecommerce Sales Model

Output	Description	Example
Sales Predictions by Segment	Amount of sales revenue predicted for each market segment	"We predict we will generate \$100,000 in Segment #1"
Budget Requirement	Amount of marketing budget required to execute campaigns	"Our campaigns will require a total campaign budget of \$20,000"
Spend/ Sales	Marketing budget spent, as a percentage of sales generated	"We spent about 10% of sales on marketing campaigns"

Model Outputs

Ecommerce Sales Model

Variable	Equation
Orders	$\text{Orders} = (\text{Sales Forecast}) / (\text{Revenue} / \text{Order})$
Orders by Segment	$\text{Orders by Segment} = (\text{Total Orders}) * (\text{Segment Sales Split})$
Responses	$\text{Responses} = (\text{Orders}) / (\text{Conversion Rate})$
Budget	$\text{Budget} = (\text{Responses}) * (\text{Cost per Response})$
Sales by Segment	$\text{Sales} = (\text{Sales Forecast}) * (\text{Segment Sales Split})$
Budget/ Sales	$\text{Budget/ Sales} = (\text{Budget}) / (\text{Sales})$

Model Governing Equations

Ecommerce Sales Model

Input: Sales	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Fiscal Year
Sales Forecast	\$50,000	\$50,000	\$50,000	\$50,000	\$200,000
Average Revenue/Order	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Segment Sales Split: Segment 1	50%	50%	50%	50%	50%
Segment Sales Split: Segment 2	30%	30%	30%	30%	30%
Segment Sales Split: Segment 3	20%	20%	20%	20%	20%

Segment 1: Early Adopters

Segment 2: Mid-Income Pragmatists

Segment 3: Value-Conscious Shoppers

Acme.com Consumer Electronics Example

Ecommerce Sales Model

Input: Campaigns	Campaign Sales Split	Conversion Rate	Cost per Response
A: Email Newsletter	40%	2.0%	\$2.20
B: PPC	35%	1.0%	\$1.00
C: Social Networking	25%	1.5%	\$1.40

Acme.com Example: Campaign Input Data

Ecommerce Sales Model

Campaign	Orders	Responses	Budget	Sales	Budget/Sales
Campaign A (Email)	40	2,000	\$4,400	\$40,000	11.0%
Campaign B (PPC)	35	3,500	\$3,500	\$35,000	10.0%
Campaign C (Social)	25	1,667	\$2,333	\$25,000	9.3%
Total	100	7,167	\$10,233	\$100,000	10.2% (Ave.)

Acme.com Example: Results for Segment 1

Orders = (Sales Forecast) / (Revenue / Order)

= (\$200,000) / (\$1,000) = 200

Orders by Segment = (Total Orders) * (Segment Sales Split)

= (200) * (50%) = 100

Orders for Campaign A= (Orders for Segment 1) * (Campaign Sales Split, Campaign A)

= (100) * (40%) = 40

Ecommerce Sales Model

Campaign	Orders	Responses	Budget	Sales	Budget/Sales
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Total	100	7,167	\$10,233	\$100,000	10.2% (Ave.)

Acme.com Example: Results for Segment 1

Responses = (Orders) / (Conversion Rate)

Responses, Campaign A = (40) / (2.0%) = 2,000

Budget = (Responses) * (Cost per Response)

Budget, Campaign A = (2,000) * (\$2.20) = \$4,400

Sales, Segment 1, Campaign A = [(Sales, Segment 1)] * (Campaign Sales Split, Campaign A)
= [(\$200,000) * (50%)] * (40%) = \$40,000

Ecommerce Sales Model

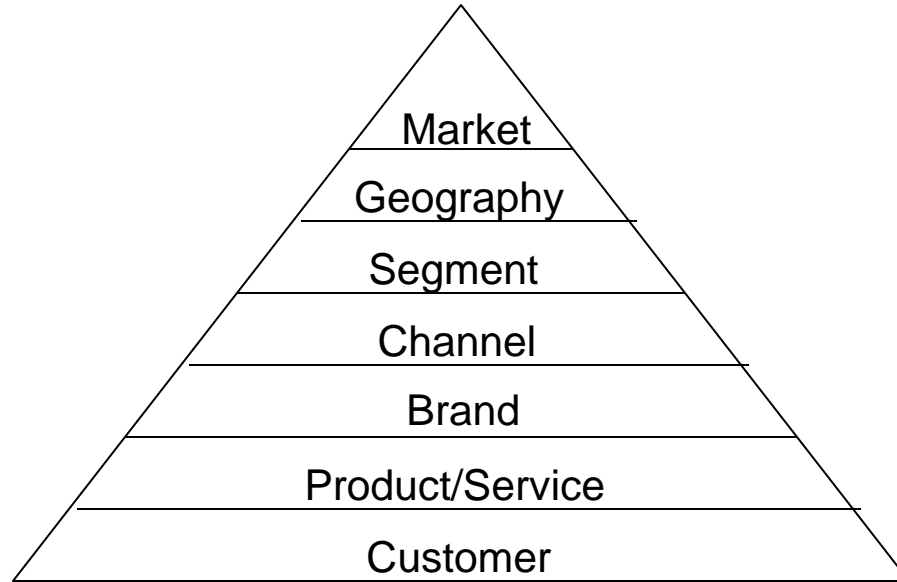
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Total	100	7,167	\$10,233	\$100,000	10.2% (Ave.)

Acme.com Example: Results for Segment 1

Segment	Orders	Responses	Budget	Sales	Budget/Sales
Segment 1	100	7,167	\$10,233	\$100,000	10.2%
Segment 2	60	4,300	\$6,140	\$60,000	10.2%
Segment 3	40	2,867	\$4,093	\$40,000	10.2%
Total	200	14,333	\$20,467	\$200,000	10.2% (Ave.)

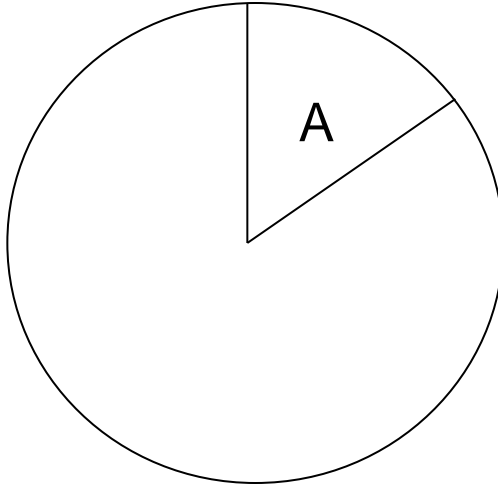
Acme.com Example: Results for All Segments

Sales Metrics



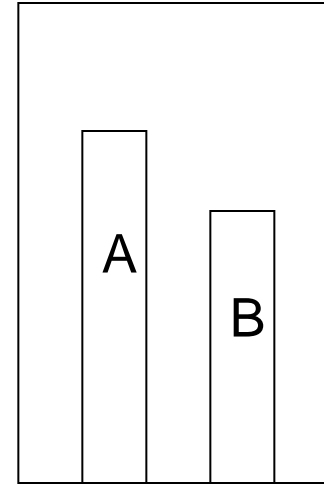
Sales Metrics Hierarchy

Sales Metrics



Market Share, Company A
Percent of Total Market

Market
Share



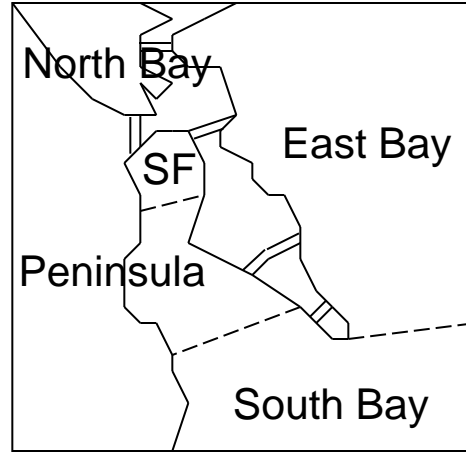
Market Share
Company A & Company B

$$\text{Market Share} = (\text{Company Sales Revenue}) / (\text{Total Market Sales Revenue})$$

$$\text{Relative Market Share} = (\text{Company Market Share}) / (\text{Largest Competitor's Market Share})$$

Sales at Market Level

Sales Metrics



Assess sales performance
from different geographical areas

$$\text{Sales by Geography} = \frac{(\text{Sales into Geography 1, Geography 2, etc.})}{(\text{Overall Sales})}$$

Growth Rate, Sales by Geography

$$= \frac{[(\text{Sales into Geography at End of Year}) - (\text{Sales into Geography at Beginning of Year})]}{(\text{Sales into Geography at Beginning of Year})}$$

Sales at Geography Level

Sales Metrics

Understand how different market segments respond to our offerings

$$\text{Sales by Segment} = \frac{(\text{Sales into Segment 1, Segment 2, etc.})}{(\text{Overall Sales})}$$

Growth Rate, Sales by Segment

$$= \frac{[(\text{Sales into Segment at End of Year}) - (\text{Sales into Segment at Beginning of Year})]}{(\text{Sales into Segment at Beginning of Year})}$$

Sales at Segment Level

Sales Metrics

Compare effectiveness of different distribution channels



$$\text{Sales by Channel} = \frac{(\text{Sales by Distribution Channel 1, Channel 2, etc.})}{(\text{Overall Sales})}$$

Growth Rate, Sales by Channel

$$= \frac{[(\text{Sales by Channel at End of Year}) - (\text{Sales by Channel at Beginning of Year})]}{(\text{Sales by Channel at Beginning of Year})}$$

Sales at Channel Level

Sales Metrics

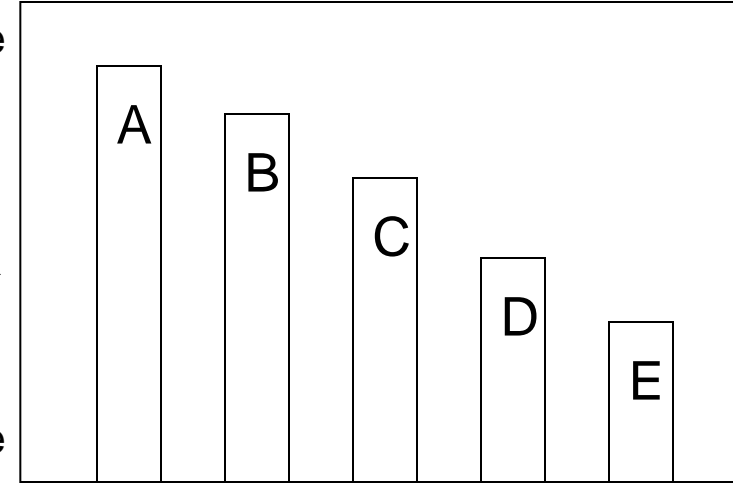
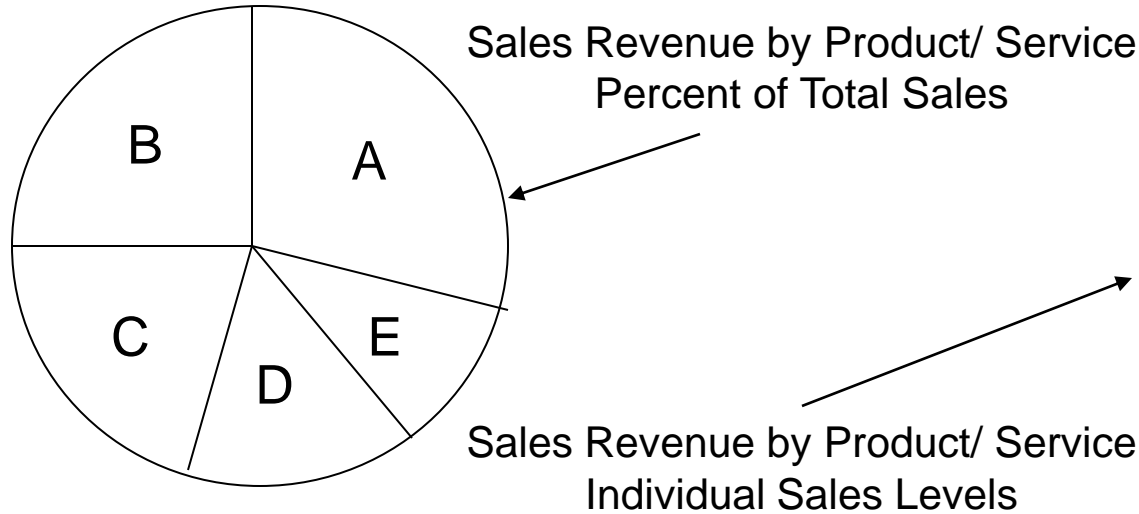
Understand how resources invested in brands translates into sales

Sales by Brand =
$$\frac{(\text{Sales by Brand 1, Brand 2, etc.})}{(\text{Overall Sales})}$$

Brand Penetration =
$$\frac{(\text{Customers Purchasing Brand 1, Brand 2, etc.})}{(\text{People in Target Market})}$$

Sales at Brand Level

Sales Metrics

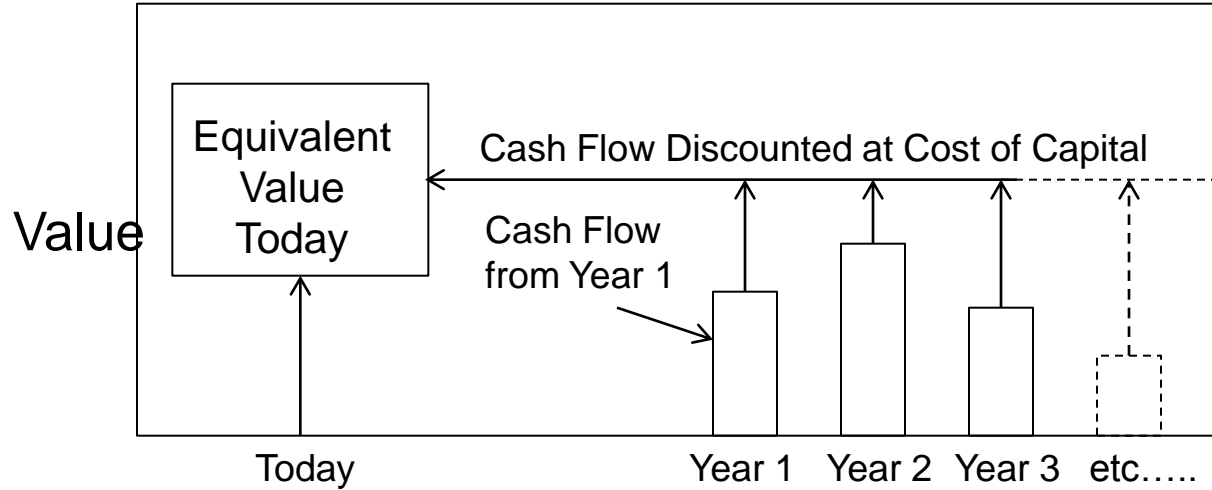


Sales Revenue by Product/Service = $\frac{\text{(Sales Revenue of Product 1, Product 2, etc.)}}{\text{(Overall Sales Revenue)}}$

Unit Sales by Product/Service = $\frac{\text{(Unit Sales of Product 1, Product 2, etc.)}}{\text{(Overall Units Sold)}}$

Sales at Product/Service Level

Sales Metrics



Customer Lifetime Value

$$\text{Customer Lifetime Value (CLV)} = \frac{\text{Margin} * (\text{Retention Rate})}{[1 + (\text{Discount Rate}) - (\text{Retention Rate})]}$$

Margin: Amount of money contributed to the organization with each sale

Retention Rate: Degree to which organization can keep customers

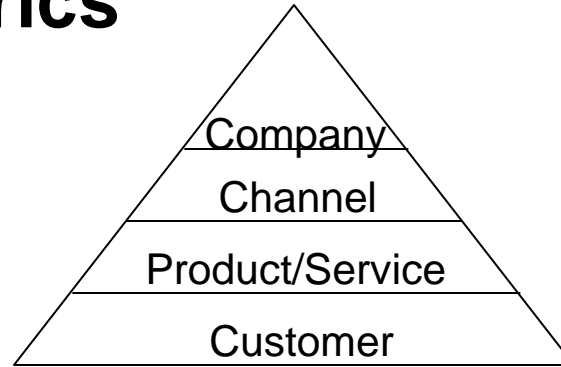
Discount Rate: Cost of capital used by companies to discount future cash flows

Sales at Customer Level

Sales Metrics: Summary

Category	Description	Metrics
By Market	Determining the big picture by measuring sales performance at the market level	Market Share Relative Market Share
By Geography	Measuring sales volumes into different geographical areas	Sales by Geography Growth Rate, Sales by Geography
By Market Segment	Estimating the sales engagement level of different market segments	Sales by Market Segment Growth Rate, Sales by Market Segment
By Channel	Evaluating the go to market sales performance of distribution channels	Sales by Channel Growth Rate, Sales by Channel
By Brand	Assessing popularity of company brands in target markets	Sales by Brand Brand Penetration
By Product/ Service	Measuring sales levels of individual products and services	Sales Revenue by Product/ Service Unit Sales by Product/ Service
By Customer	Assessing potential revenue (and profit) at the customer level	Customer Lifetime Value

Profitability Metrics



Category	Description	Metrics
By Company	Determining the big picture by measuring profitability at the company level	Company Gross Margin Amount Company Gross Margin %
By Channel	Evaluating the go to market profit performance of distribution channels	Channel Margins
By Product/ Service	Measuring the profitability of individual products and services	Unit Margin Amount Unit Margin Percentage
By Customer	Assessing the potential profit at the customer level	Customer Profit

Profitability Metrics Hierarchy

Profitability Metrics

Marketers are most often interested in gross margin,
as opposed to straight profitability
due to little direct control over certain operating expenses and cost allocations

Company Gross Margin Amount = (Total Sales) – (Total Cost of Sales)

Cost of Sales: Total amount of direct material, direct labor, and company overhead
involved in producing company products and services

Company Gross Margin Percentage = (Company Gross Margin Amount) / (Total Sales)

Profitability at Company Level

Profitability Metrics

Companies with networks of distribution channels, such as manufacturers of consumer goods, benefit by monitoring and evaluating profitability at the channel level

Governing Equations:

Customer Selling Price = (Supplier Selling Price) / [1 – (Customer Margin Percentage)]

Customer Selling Price = (Supplier Selling Price) + (Customer Margin Amount)

Supplier Selling Price = (Customer Selling Price) – (Customer Margin Amount)

Profitability at Channel Level

Profitability Metrics

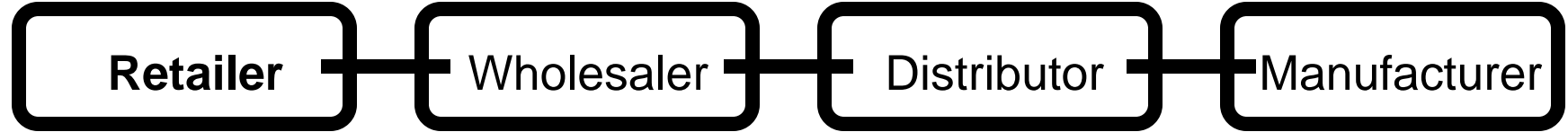
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Channel Pricing Terminology

- Customer Selling Price:** The price for which the distribution channel member sells its products to the next member in the distribution chain (its customer).
- Supplier Selling Price:** The price the distribution channel member pays to acquire the product.
- Customer Margin Amount:** The monetary amount (such as dollars or Euros) the channel member charges to move the product through their channel.
- Customer Margin Percentage:** The percentage markup the channel member charges to move the product through their channel.

Profitability at Channel Level

Profitability Metrics



Example showing “**Chain of Margins**”

Acme Cosmetics; Green tea-enriched wrinkle cream; Retail price: \$10/ jar

1. Retailer: Retailer sells to consumers for \$10

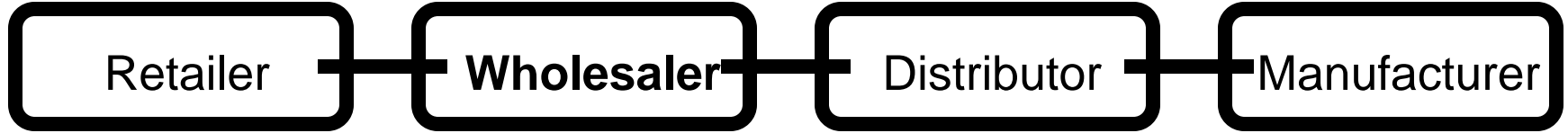
Value-add: Stocking, displaying, selling

Supplier Selling Price: Consumer does not resell cream, so not applicable

Margin: 40% of cost to its customer (the end consumer): $40\% * \$10 = \4

Profitability at Channel Level

Profitability Metrics



Example showing “**Chain of Margins**”

Acme Cosmetics; Green tea-enriched wrinkle cream; Retail price: \$10/ jar

2. Wholesaler: Wholesaler supplies cream to its customer, the retailer

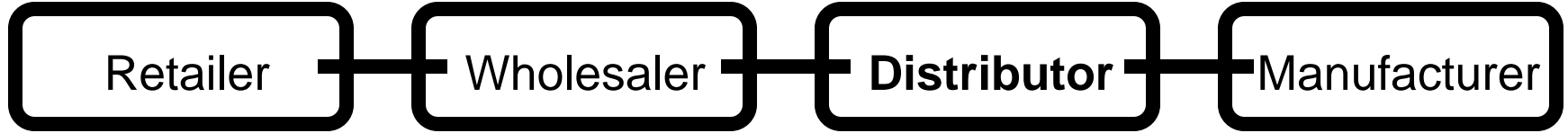
Value-add: Stocking, shipping

Supplier Selling Price: (Customer selling price) – (Customer margin amount)
= \$10 - \$4 = \$6

Margin: 25% of the cost to its customer (the retailer): $25\% * \$6 = \1.50

Profitability at Channel Level

Profitability Metrics



Example showing “**Chain of Margins**”

Acme Cosmetics; Green tea-enriched wrinkle cream; Retail price: \$10/ jar

3. Distributor: Distributor supplies cream to wholesaler

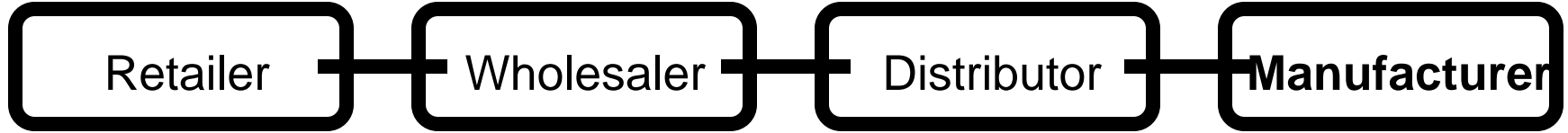
Value-add: Stocks many different items for fast fulfillment

Supplier Selling Price: \$6 - \$1.50 = \$4.50

Margin: 20% of the cost to its customer (the wholesaler): $20\% * \$4.50 = \0.90

Profitability at Channel Level

Profitability Metrics



Example showing “**Chain of Margins**”

Acme Cosmetics; Green tea-enriched wrinkle cream; Retail price: \$10/ jar

4. Manufacturer: Manufacturer supplies cream to distributor

Value-add: Makes product

Supplier Selling Price: $\$4.50 - \$0.90 = \$3.60$

Margin: 50% of the cost to its customer (the distributor): $50\% * \$3.60 = \1.80

Profitability at Channel Level

Profitability Metrics

Sales per product/ service is routinely measured at many organizations
Need to team sales with cost to get profitability

We use the term unit margin to define the contribution each unit
of product or service makes to profit.

In monetary terms (U.S. Dollars, Euros, etc.):

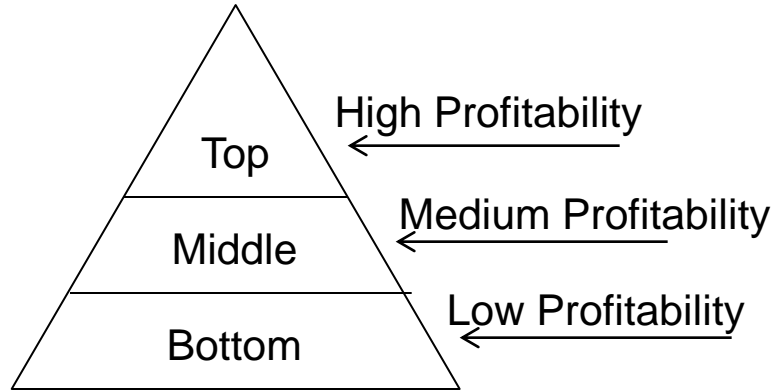
Unit Margin Amount = (Selling Price per Unit) – (Cost per Unit)

In percentage terms (%):

Unit Margin Percentage = (Unit Margin Amount) / (Selling Price per Unit)

Profitability at Product/ Service Level

Profitability Metrics



Tier	Goal	Airlines Loyalty Program Example
Top	Reward	Free upgrades; Customer lounge
Middle	Grow	Remind of perks in Top Tier
Bottom	Charge	Baggage fees; Internet fees

$$\text{Customer Profit} = (\text{Customer Revenue}) - (\text{Customer Cost})$$

Companies seeking to benefit from long-term relationships with customers need to understand profitability at the customer level.

Profitability at Customer Level

Support Metrics

Category	Description	Metrics
Customer Satisfaction	Determining the percentage of customers whose customer satisfaction ratings exceed specified goals	Customer Satisfaction Likelihood to Recommend
Net Promoter Score	Predicting future customer satisfaction and loyalty	Net Promoter Score

Satisfaction Score

Comments

Very Satisfied

Marketers refer to this score as the “Top Box”

Somewhat Satisfied

“Top Two Boxes” (along with Very Satisfied)

Neither Satisfied nor Dissatisfied

Neutral; some surveys use even number of choices

Somewhat Dissatisfied

Fair amount of dissonance

Very Dissatisfied

Major problems

Customer Satisfaction

Support Metrics

Net Promoter Score

Developed by Fred Reichheld; Single number to capture customer satisfaction

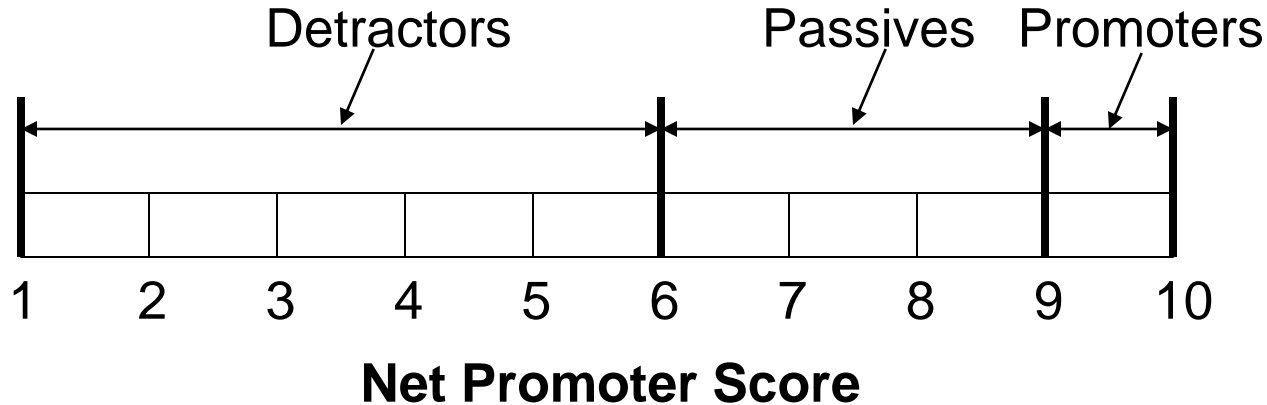
Single question: Would you be willing to recommend this to others?

Promoters: Those highly likely to recommend

Detractors: Those highly unlikely to recommend

Passives: Everyone else

Net Promoter Score = (Percentage of Promoters) – (Percentage of Detractors)



Check Your Understanding

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