

BEE/CSS 371 Business of Technology
Winter 2017
Lecture 10

Nicole Hamilton

<https://faculty.washington.edu/kd1uj>

Today's agenda

1. Chapter 4. [Competitive strategy](#)
2. Chapter 5. [Innovation strategies](#)
3. [Basic accounting](#)

Reminder: Midterm on Wednesday

Competitive advantages are those distinctive factors that give a firm a superior or favorable position relative to its competitors.

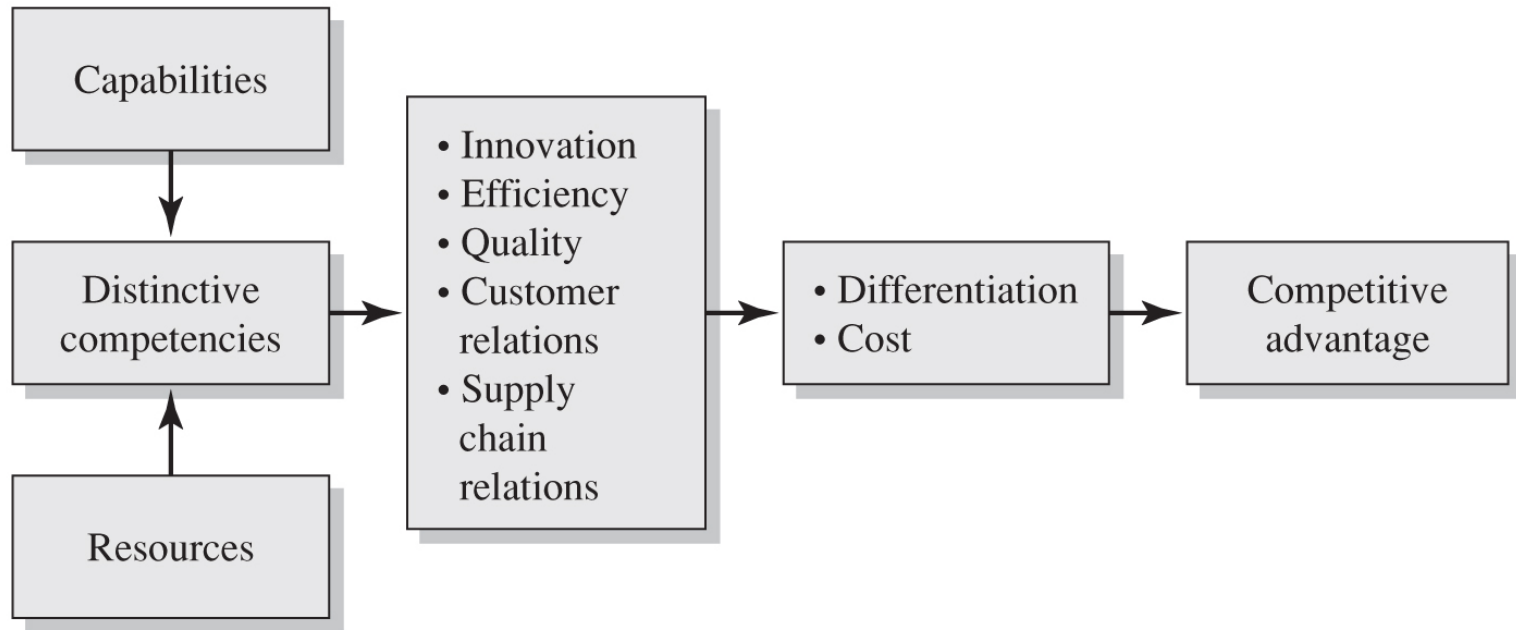


FIGURE 4.5 Distinctive competencies lead to a competitive advantage.

		COMPETITIVE ADVANTAGE	
		Lower Cost	Differentiation
COMPETITIVE SCOPE	Broad Target	1. Cost Leadership	2. Differentiation
	Narrow Target	3A. Cost Focus	3B. Differentiation Focus

Figure 1-3. Three Generic Strategies

Source: Porter, *Competitive Advantage*, p. 12.

TABLE 4.6 Four common types of strategies and their characteristics.

Factor	Type of strategy			
	Differentiation	Low cost	Differentiation-cost	Niche
Distinctive competencies	Innovation and relationships	Processes, logistics	Innovation and processes	Relationships
Product differentiation	High	Low	Medium	Medium
Market segmentation	Many segments	Mass market	Many segments	One or two segments
Examples	Intel	RadioShack	Dell	Getty Images
	Microsoft	Wal-Mart	Southwest Airlines	Incyte

TABLE 5-1 Product and Process Technology and the Generic Strategies

	COST LEADERSHIP	DIFFERENTIATION	COST FOCUS	DIFFERENTIATION FOCUS
	ILLUSTRATIVE TECHNOLOGICAL POLICIES			
<i>Product Technological Change</i>	Product development to reduce product cost by lowering material content, facilitating ease of manufacture, simplify logistical requirements, etc.	Product development to enhance product quality, features, deliverability, or switching costs	Product development to design in only enough performance for the target segment's needs	Product design to meet the needs of a particular segment better than broadly-targeted competitors
<i>Process Technological Change</i>	Learning curve process improvement to reduce material usage or lower labor input Process development to enhance economies of scale	Process development to support high tolerances, greater quality control, more reliable scheduling, faster response time to orders, and other dimensions that raise buyer value	Process development to tune the value chain to a segment's needs in order to lower the cost of serving the segment	Process development to tune the value chain to segment needs in order to raise buyer value

Source: Porter, *Competitive Advantage*, p. 178.

TABLE 1-1 Risks of the Generic Strategies

RISKS OF COST LEADERSHIP	RISKS OF DIFFERENTIATION	RISKS OF FOCUS
<p>Cost leadership is not sustained</p> <ul style="list-style-type: none"> • competitors imitate • technology changes • other bases for cost leadership erode 	<p>Differentiation is not sustained</p> <ul style="list-style-type: none"> • competitors imitate • bases for differentiation become less important to buyers 	<p>The focus strategy is imitated</p> <p>The target segment becomes structurally unattractive</p> <ul style="list-style-type: none"> • structure erodes • demand disappears
<p>Proximity in differentiation is lost</p>	<p>Cost proximity is lost</p>	<p>Broadly-targeted competitors overwhelm the segment</p> <ul style="list-style-type: none"> • the segment's differences from other segments narrow • the advantages of a broad line increase
<p>Cost focusers achieve even lower cost in segments</p>	<p>Differentiation focusers achieve even greater differentiation in segments</p>	<p>New focusers sub-segment the industry</p>

Source: Porter, *Competitive Advantage*, p. 12.

TABLE 4.7 Ten types of sustainable competitive advantage.

Type	Example
■ High quality	Hewlett-Packard
■ Network size	eBay
■ Low-cost production or operation	Wal-Mart
■ Product design and functionality	Google
■ Market segmentation	Facebook
■ Product-line breadth	Amazon.com
■ Product innovation	Medtronic
■ Effective sales methods	Pfizer
■ Product selection	Oracle
■ Intellectual property	Genentech

An opportunity for differentiation exists
anywhere in the consumption sequence.

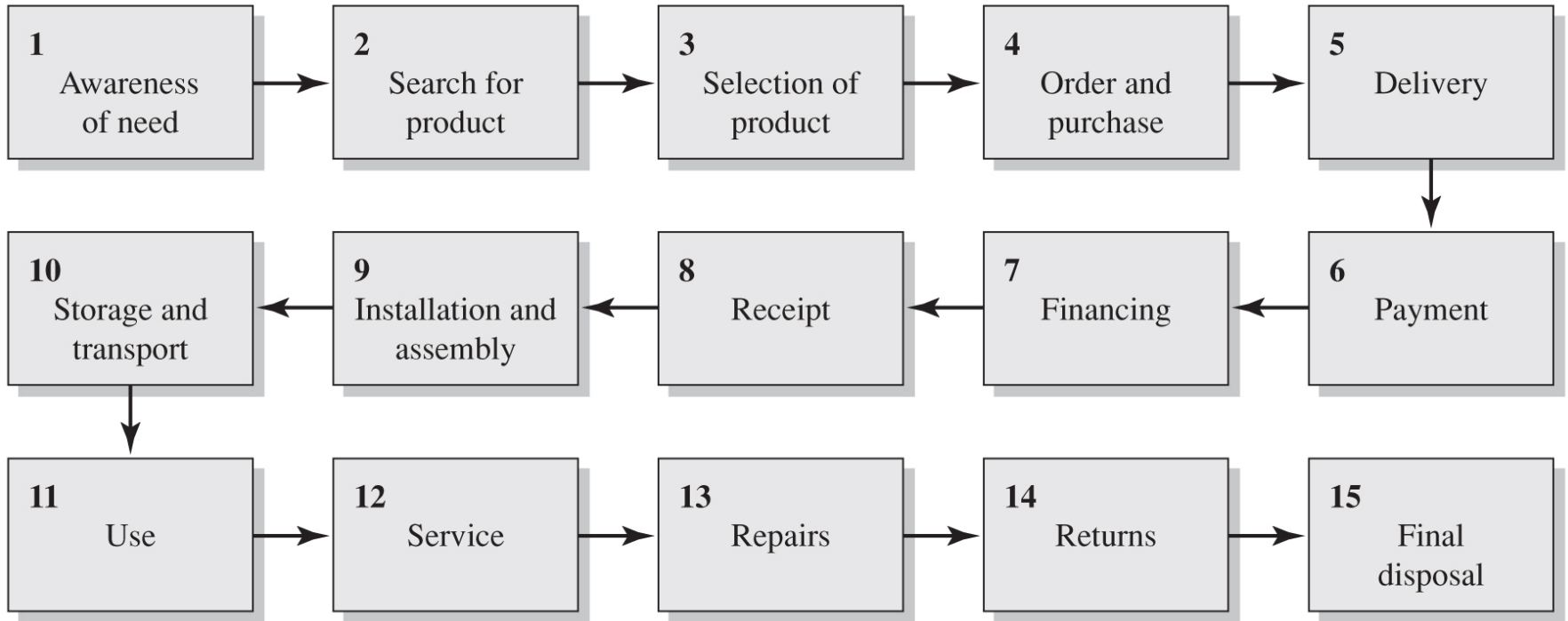


FIGURE 4.9 Consumption sequence.

Chapter 5. Innovation strategies

Important ideas

1. First movers vs. followers
2. Imitation
3. Strategy
4. Ventures

A **first-mover advantage** is the gain that a firm attains when it is first to market a new product or enter a new market.

TABLE 5.1 Three types of industries and their characteristics.

Characteristics	Type of industry		
	Mature	Growing	Emergent
Revenue growth	Slow	Moderate	Potentially fast
Stability	High	Moderate	Low
Uncertainty	Low	Moderate	High
Industry rules	Fixed	Fluid	Unestablished
Competitiveness	High	Moderate	Low or none

TABLE 5.2 First-mover potential advantages and disadvantages.

Possible advantages	Possible disadvantages
■ Create the standard and the rules	■ Short-lived advantages disappear with competition
■ Low-cost position	■ Higher development costs
■ Create and protect intellectual property	■ Established firms circumvent or violate patents and intellectual property rights
■ Tie up strategic resources	■ Cost of attaining the resources
■ Increase switching costs for the producer	■ High uncertainty of designing the right product. If vision is wrong, then costs to switch are large
■ Increase switching costs for the customer	■ Customer is reluctant to buy when a large cost to switch may be incurred

A **follower** firm can learn from the pioneer's mistakes in product, strategy and execution and exploit the opportunity the pioneer identified.

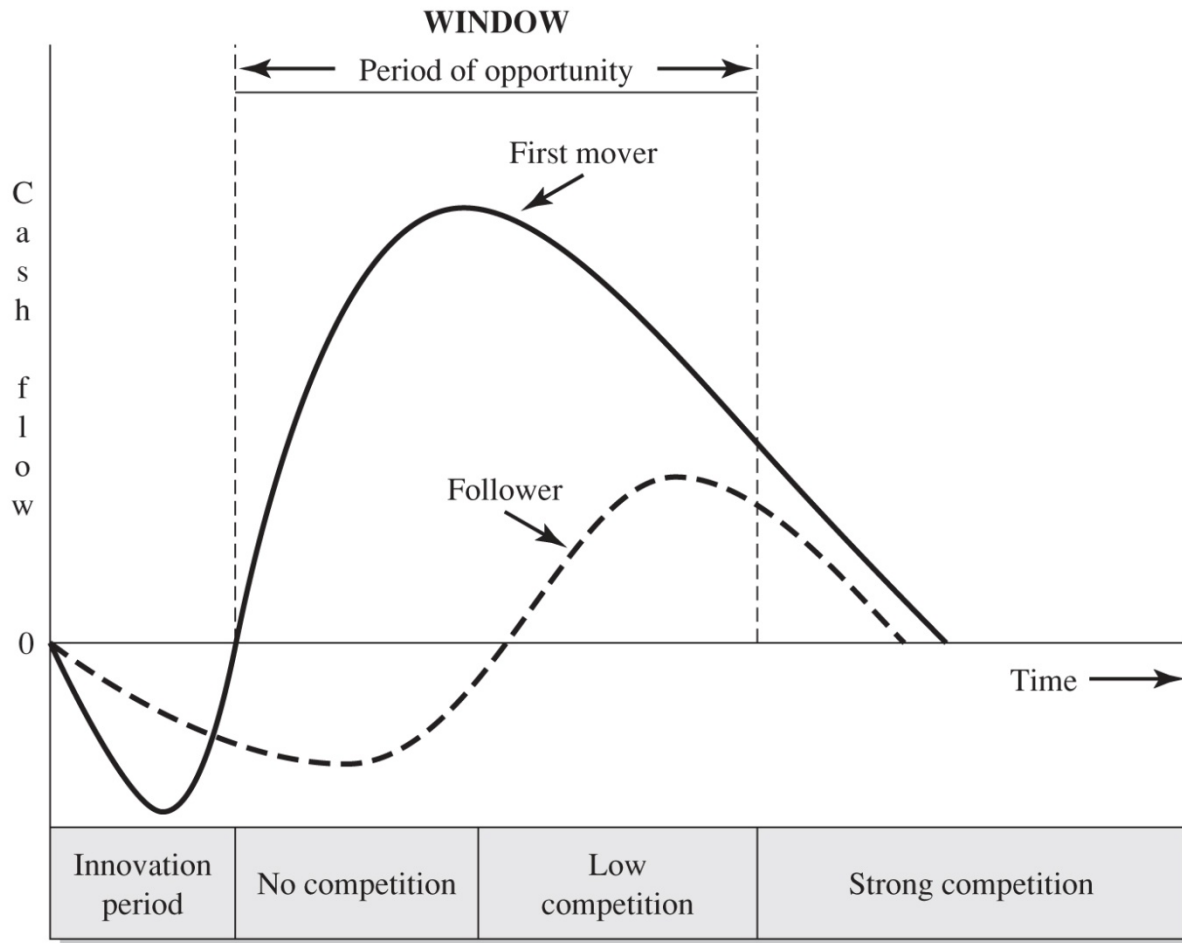


FIGURE 5.1 Expected first mover advantage and the concept of a window of opportunity.

TABLE 5.4 Factors that influence the entrepreneur to exploit an independent invention.

1. Business interests, capabilities, and experiences of the entrepreneurial team
 2. Characteristics of the industry in which the invention will be exploited
 3. Characteristics of the invention:
 - a. Importance of the invention: Economic value and potential payoff
 - b. Radicalness of the invention: Differentiation of the invention from its predecessors
 - c. Breadth of patent protection of the intellectual property
-

TABLE 5.5 Elements of an attractive innovation strategy.

- Well-defined customer
 - Key customer benefit that is measurable in dollars
 - Short period until economic payback and positive cash flow
 - High benefit-to-price ratio for the customer
 - Proprietary advantage that can be maintained or defended
 - Core competencies required to exploit the new technology present or available to the new venture
 - Access to the necessary resources
-

Basic accounting

Basic accounting concepts

1. Entity.
2. Going concern.
3. Monetary.
4. Matching or Accrual basis.
5. Accounting period.
6. Revenue recognition.
7. Historical costs.
8. Materiality.
9. Conservatism.

Sources: Spiller & Gosman, *Financial Accounting: Basic Concepts*, pp 22-25, and Ittelson, *Financial Statements*, pp 25-26.

Entity. Accounting reports and records are for the entity, not the people or groups concerned with it.

Going concern. The entity is assumed to remain in operation. There is no need to focus on liquidation values.

Monetary. Money is used to measure accounting events. Fluctuations in the value of the dollar can be ignored.

Historical costs. Assets and claims are recorded at original prices.

Matching or Accrual basis. Net income is best measured by matching costs against revenues.

Accounting period. Economic activity is assumed to be divisible into time periods.

Revenue recognition. Revenue should be recognized only when it's earned and can be measured.

Conservatism. Losses reported when they are probable, gains are reported only after they actually happen.

Materiality. All transactions that would materially affect the financial condition must be reported.

Main accounting statements

1. Balance sheet.
2. Income statement.

Balance sheet

Assets = Equities

Assets = Liabilities + Owner's equity

An equity is an ownership interest, e.g., your parents' equity in their homes.

If the business has assets, someone must have a claim on them. They're paid for with equity or debt.

The balance sheet

		Most liquid		
<i>Assets</i>		↑	<i>Liabilities & owners' equity</i>	
Cash	a		Accounts payable	k
Accounts receivable	b		Accrued expenses	L
Inventory	c		Current portion of debt	m
Prepaid expenses	d		Income taxes payable	n
Current assets	<hr/> e = a + b + c + d		Current liabilities	<hr/> o = k + L + m + n
Other assets	f		Long-term debt	p
Fixed assets at cost	g		Capital stock	q
Accumulated depreciation	h		Retained earnings	r
Net fixed assets	<hr/> i = g - h		Shareholder's equity	<hr/> s = q + r
Total assets	j = e + f + i	↓	Total liabilities & equity	t = o + p + s
		Least liquid		

Current assets

Assets which are expected to be turned into cash *within one year*.

Includes:

- Cash
- Accounts receivable
- Inventory
- Marketable securities
- Prepaid expenses
- Other assets readily convertible into cash

Current liabilities

Debts or other obligations due *within one year*.

Working capital

Money the business has to work with in the short term.

Working capital =

Current assets – Current liabilities

Income statement

An income statement is also called a profit and loss statement or a *P&L*.

Income statement

Net sales	a
Cost of goods sold (COGS)	b
Gross margin	<hr/> $c = a - b$
Sales & marketing	d
Research & development	e
General & administrative	f
Operating expenses	<hr/> $g = d + e + f$
Income from operations	$h = c - g$
Interest income	i
Income taxes	j
Net income	$k = h + i - j$

Costs vs. Expenses

Costs are amounts spent to create inventory.

Expenses are for R&D, marketing and administrative needs of the business.

Expenses versus assets

An expense is a cost that decreases assets or increases liabilities.

An expense reduces net income and thus, the tax you pay.

Buying an asset merely exchanges one type of asset (e.g., cash) for another (e.g., a computer).

If the expected lifetime of the asset is more than a year, you're often required to spread the cost out as a yearly expense, called ***depreciation***.

Depreciation

A *non-cash* expense.

Example: You buy a \$10K machine you expect to use for 10 years before it will need replacement. You're *using up* 1/10th of it every year = \$1K/yr. To allow for this, you deduct that amount used up from your income.

But you don't spend cash. You just use up an asset you already own.

Cash flow

Cash flow

Beginning cash	a
Cash receipts	b
Cash disbursements	c
Cash from operations	<hr/> $d = b - c$
Fixed asset purchases	e
Net borrowings	f
Income taxes paid	g
Sale of stock	h
Ending cash	$i = a + d - e + f - g + h$