Measuring the Moat

2 dimensions to sustainable value creation:

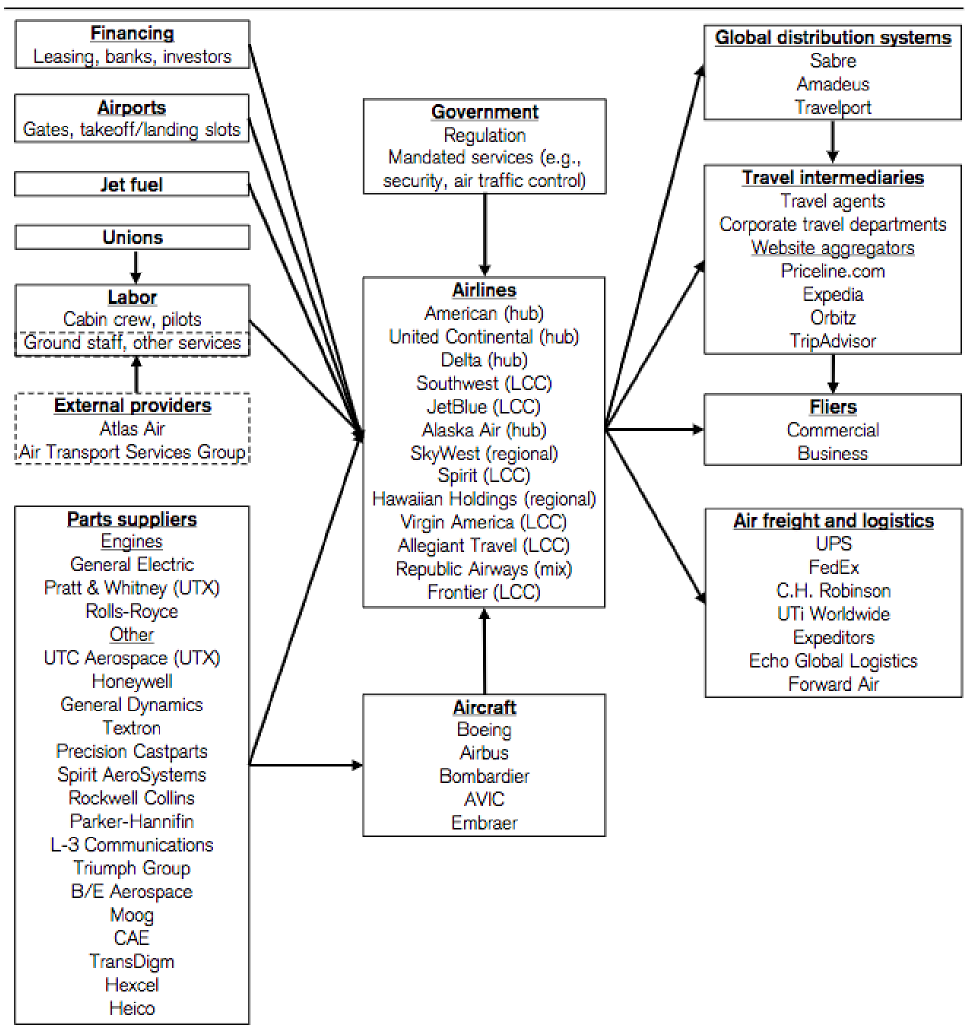
1) magnitude of spread between ROIC (return on invested capital) and CC (cost of capital)
2) duration of the positive spread (CAP – competitive advantage period)

3 Parts of Industry Analysis

1) Lay of the land

   a. Mapping

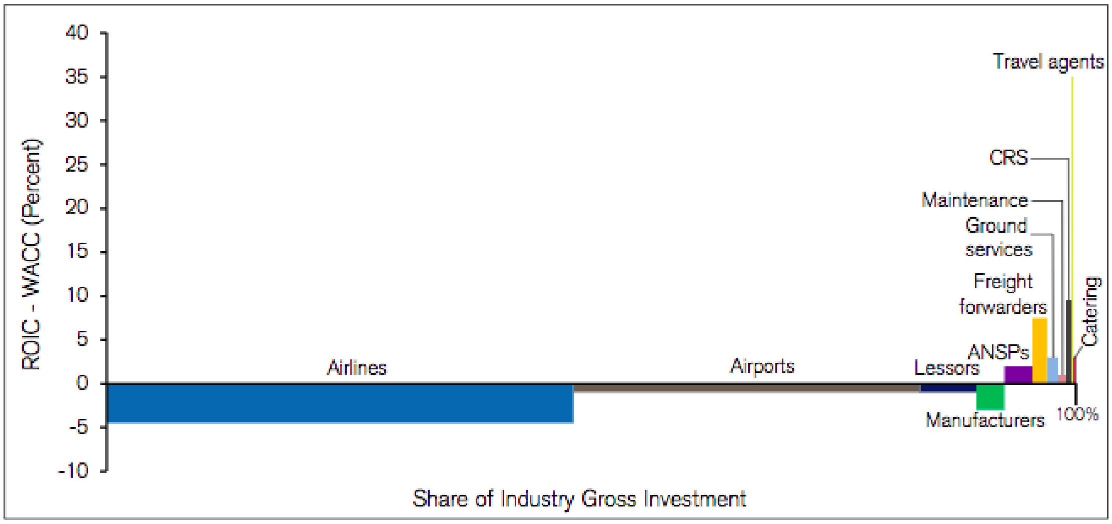
<u>Example for Airlines</u>



b. Profit Pools

- Profit pools reveal value creation by industry.
- X-axis is invested capital or sales as a % of industry
- Y-axis is (ROIC – CC) (Mauboussin uses CFROI – cash flow return on investment)

Airlines Example



c. Industry Stability

- Market share stability and pricing stabillity
- Absolute average changes of 2.0 or less over five years reveal a stable industry

Automobile Market Share Example

Auto Manufacturers (U.S. Market)	2010	2015	5-Year Change
General Motors	19%	18%	2%
Ford Motor Company	17%	15%	2%
Toyota Motor Corporation	15%	14%	1%
Honda Motor Company	11%	9%	2%
Chrysler Group/FCA	9%	13%	3%
Nissan Motor Company	8%	9%	1%
Hyundai-Kia	8%	8%	0%
Volkswagen Group	3%	3%	0%
BMW-Mini	2%	2%	0%
Subaru	2%	3%	1%
Mazda	2%	2%	0%
Daimler	2%	2%	0%
Other	2%	2%	1%
Total	100%	100%	
Average Absolute Change			1%

Pricing Stability

Industry	Average Annual Price Change
Slow-cycle markets	
Dental Laboratories	7.7%
Rail and Transportation	4.4%
Breweries	3.4%
Standard-cycle markets	
Highways and Streets	3.0%
Motor and Generator Manufacturing	2.8%
Bread and Bakery Product Manufacturing	2.5%
Fast-cycle markets	
Warehousing and Storage	-1.3%
Wireless Telecommunications Carriers (Except Satel	-2.3%
Electronics and Appliance Stores	-2.5%

2) Industry Structure

   a. New entrants (barriers to entry)

- Entry and exit rates (most entrants don't survive 10 years but those who do, thrive)
- Minimum efficient scale (for high fixed cost business, there is higher barrier to entry b/c economies of scale)
- Patents
- Learnings curves
- Network effects
- Expected payoff

   b. Rivalry

- Herfindahl-Hirschman Index: 10,000 * sum(market shares)^2
- Higher the number, the more concentrated the industry is

Industry (Manufacturing)	Herfindahl-Hirschman Index
Breakfast cereal	2,333
Household appliances	1,576
Tires	1,377
Automobiles	1,178
Plastic bottles	934
Flour milling	772
Explosives	771
Book printing	623
Poultry processing	600
Stationery products	497
Iron founderies	454
Sporting and athletic goods	373
Animal food	369
Basic chemicals	362
Fabric mills	275
Motor vehicle bodies	207
Adhesives	182
Machinery	91
Computer and electronic products	72
Retail bakeries	12

3. Likelihood of innovation – look for disruptors

- The point of Disruption Theory is that passive over disruptive innovation appears completely rational
- Three types of innovations

a. Sustaining (not disruption)
b. Low-End disruption (Southwest Airlines)
c. New-market disruption (streaming)

	Sustaining Innovation	Low-End Disruption	New-Market Disruption
Customers	Undershot customer	Overshot customer at low end of existing market	Non-consumer or non-producer
Technology (product/service /process)	Improvement along primary basis of competition	Good enough performance at lower prices	Simpler, customizable; lets people "do it themselves"
Business Model	Extension of winning business model	Attractive returns at lower prices	Completely new model, different from core business
Competitor Response	Motivated to respond	Motivated to flee	Motivated to ignore

Firm Specific Analysis

1) Value creation = willingness to pay – opportunity cost

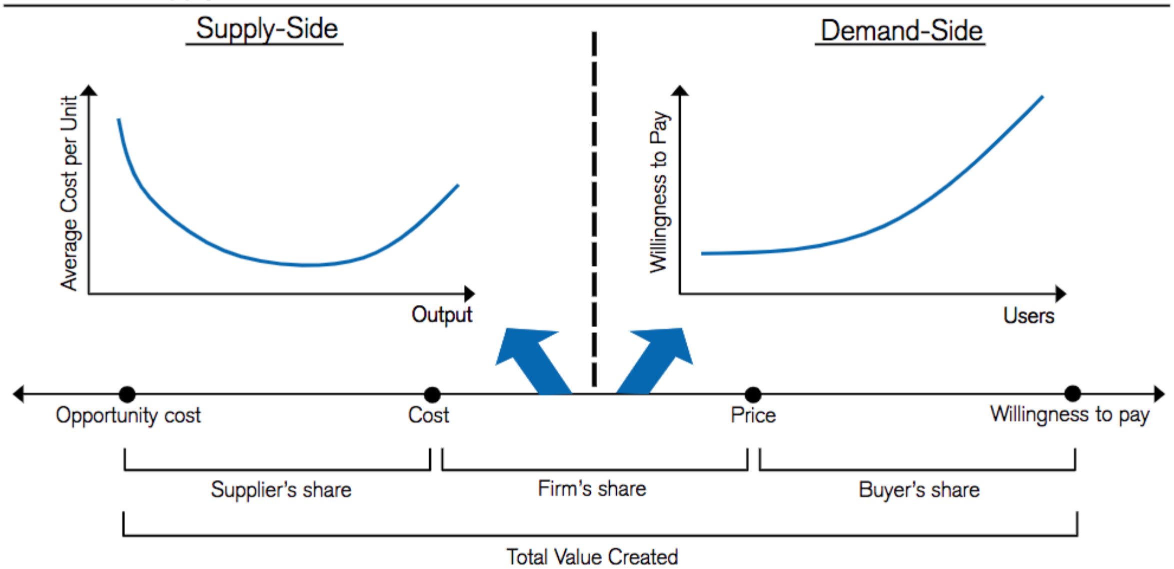
a. Value Chain – at which point is a company strong/weak?

- R&D
- Supply chain management
- Operations
- Sales and marketing
- Customer support

b. Production Advantages

- Supply-side vs. demand side

Exhibit 24: Supply- versus Demand-Side Driven Scale Economies



Source: Credit Suisse.

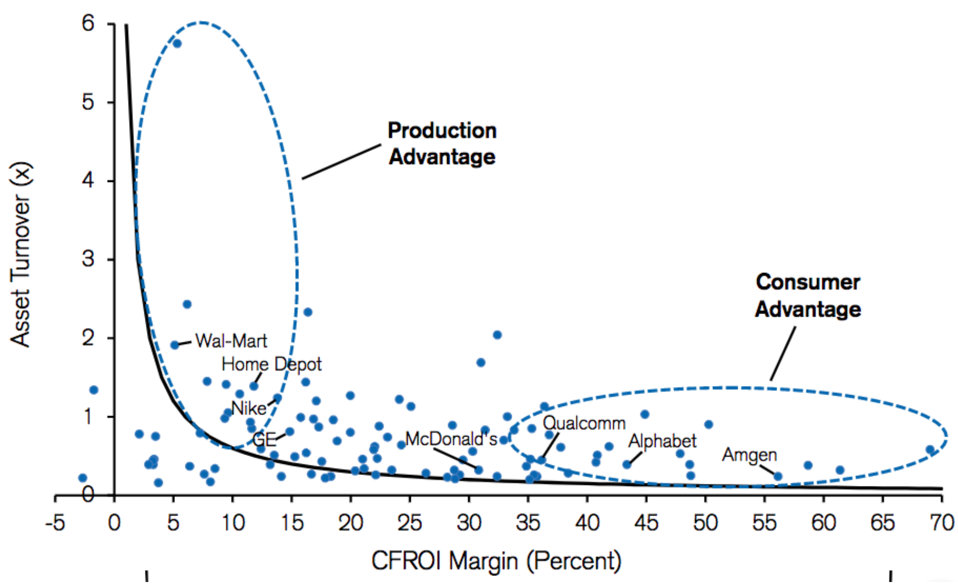
- 4 Areas of supply side advantages
    - Distribution
    - Purchasing
    - R&D
    - Advertising

c. Consumer Advantages

- Horizontal differentiation: consumer preferences
- Experience goods: reputation, credibility, image
- Switching costs
    - Contracts
    - Training
    - Databases
    - Search costs
    - Loyalty programs

- Network Effects
    - Radial is less powerful than interactive

<u>Power of Consumer Advantages</u>



2) Firm Interaction

a. Game Theory
- Capacity Addition

b. Brands
- Best way to consider brands is by the amount of value added
- Usually consumer surplus vs. production advantages

c. Management Skill vs. Luck
- The two things that matter:
    - Better over cheap
    - Increase revenue over decreasing cost

Checklists

Overview

- ☐ In what stage of the competitive life cycle is the company?
- ☐ Is the company currently earning a return above its cost of capital?
- ☐ Are returns on invested capital increasing, decreasing, or stable? Why?
- ☐ What is the trend in the company's investment spending, including mergers and acquisitions?

Lay of the Land

- ☐ What percentage of the industry does each player represent?
- ☐ What is each player's level of profitability?
- ☐ What have the historical trends in market share been?
- ☐ How stable is the industry?
  - ☐ How stable is market share?
  - ☐ What do pricing trends look like?
- ☐ What class does the industry fall into—fragmented, emerging, mature, declining, international, network, or hypercompetitive?

The First Three of the Five Forces

- ☐ How much leverage do suppliers have?
- ☐ Can companies pass price increases from their suppliers on to their customers?
- ☐ Are there substitute products available?
- ☐ Are there switching costs?
- ☐ How much leverage do buyers have?
- ☐ How informed are the buyers?

Barriers to Entry

- ☐ What are the rates of entry and exit in the industry?
- ☐ How will the incumbents react to the threat of new entrants?
- ☐ What is the reputation of incumbents?
- ☐ How specific are the assets?
- ☐ What is the minimum efficient production scale?
- ☐ Does the industry have excess capacity?
- ☐ Is there a way to differentiate the product?
- ☐ What is the anticipated payoff for a new entrant?
- ☐ Do incumbents have precommitment contracts?
- ☐ Do incumbents have costly licenses or patents?
- ☐ Are there benefits from the learning curve?

Rivalry

- ☐ Is there pricing coordination?
- ☐ What is the industry concentration?
- ☐ What is the size distribution of firms?
- ☐ How similar are the firms in incentives, corporate philosophy, and ownership structure?
- ☐ Is there demand variability?
- ☐ Are there high fixed costs?
- ☐ Is the industry growing?

Disruption and Disintegration

- ☐ Is the industry vulnerable to disruptive innovation?
- ☐ Do new innovations foster product improvements?
- ☐ Is the innovation progressing faster than the market's needs?
  - ☐ Have established players passed the performance threshold?
  - ☐ Is the industry organized vertically, or has there been a shift to horizontal markets?

Firm Specific

- ☐ Does analysis of the value chain reveal what activities a company does differently than its rivals?
- ☐ Does the firm have production advantages?
  - ☐ Is there instability in the business structure?
  - ☐ Is there complexity requiring know-how or coordination capabilities?
  - ☐ How quickly are the process costs changing?
- ☐ Does the firm have any patents, copyrights, trademarks, etc.?
- ☐ Are there economies of scale?
  - ☐ What does the firm's distribution scale look like?
  - ☐ Are assets and revenue clustered geographically?
  - ☐ Are there purchasing advantages with size?
  - ☐ Are there economies of scope?
  - ☐ Are there diverse research profiles?
- ☐ Are there consumer advantages?
  - ☐ Is there habit or horizontal differentiation?
  - ☐ Do people prefer the product to competing products?
  - ☐ Are there lots of product attributes that customers weigh?
  - ☐ Can customers only assess the product through trial?
  - ☐ Is there customer lock-in? Are there high switching costs?
- ☐ Is the network radial or interactive?
- ☐ What is the source and longevity of added value?
- ☐ Are there external sources of added value (subsidies, tariffs, quotas, and competitive or environmental regulations)?

Firm Interaction—Competition and Coordination

- ☐ Does the industry include complementors?
- ☐ Is the value of the pie growing because of companies that are not competitors? Or, are new companies taking share from a pie with fixed value?

Brands

- ☐ Do customers want to "hire" the brand for the job to be done?
- ☐ Does the brand increase willingness to pay?
- ☐ Do customers have an emotional connection to the brand?
- ☐ Do customers trust the product because of the name?
- ☐ Does the brand imply social status?
- ☐ Can you reduce supplier operating cost with your name?