Innovation

Competitive Strategy, Lecture 7

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Overview of Today

- Value Creation in Innovation
- Value Capture in Innovation

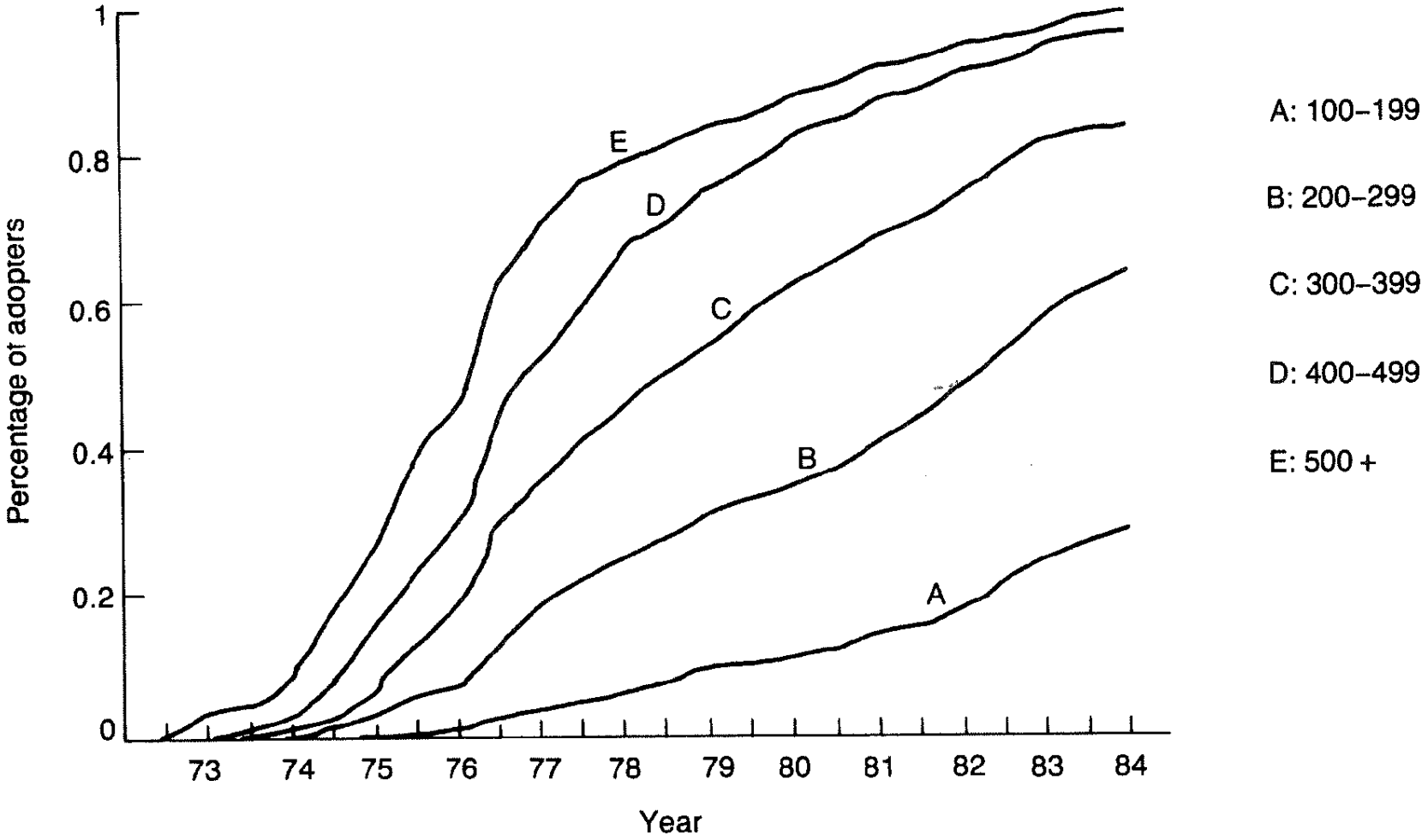
Warm-Up: Innovator Tradeoffs

- Advantages
  - SR: Monopoly power
  - LR: Reputation, switching costs, learning curves
  - Deterrence: Marketing, locking up key inputs
- Disadvantages
  - Hard to protect (patents?)
  - Harder to prevent leapfrogging
  - Uncertainty about market size, structure, regulation

Does the Innovation Create Value?

- Should be straightforward to identify the value created
- However...
- Diffusion paths are very difficult to predict!
  - Will the new technology take off?
  - How fast?
  - Will it substitute for existing, or be complementary with it?

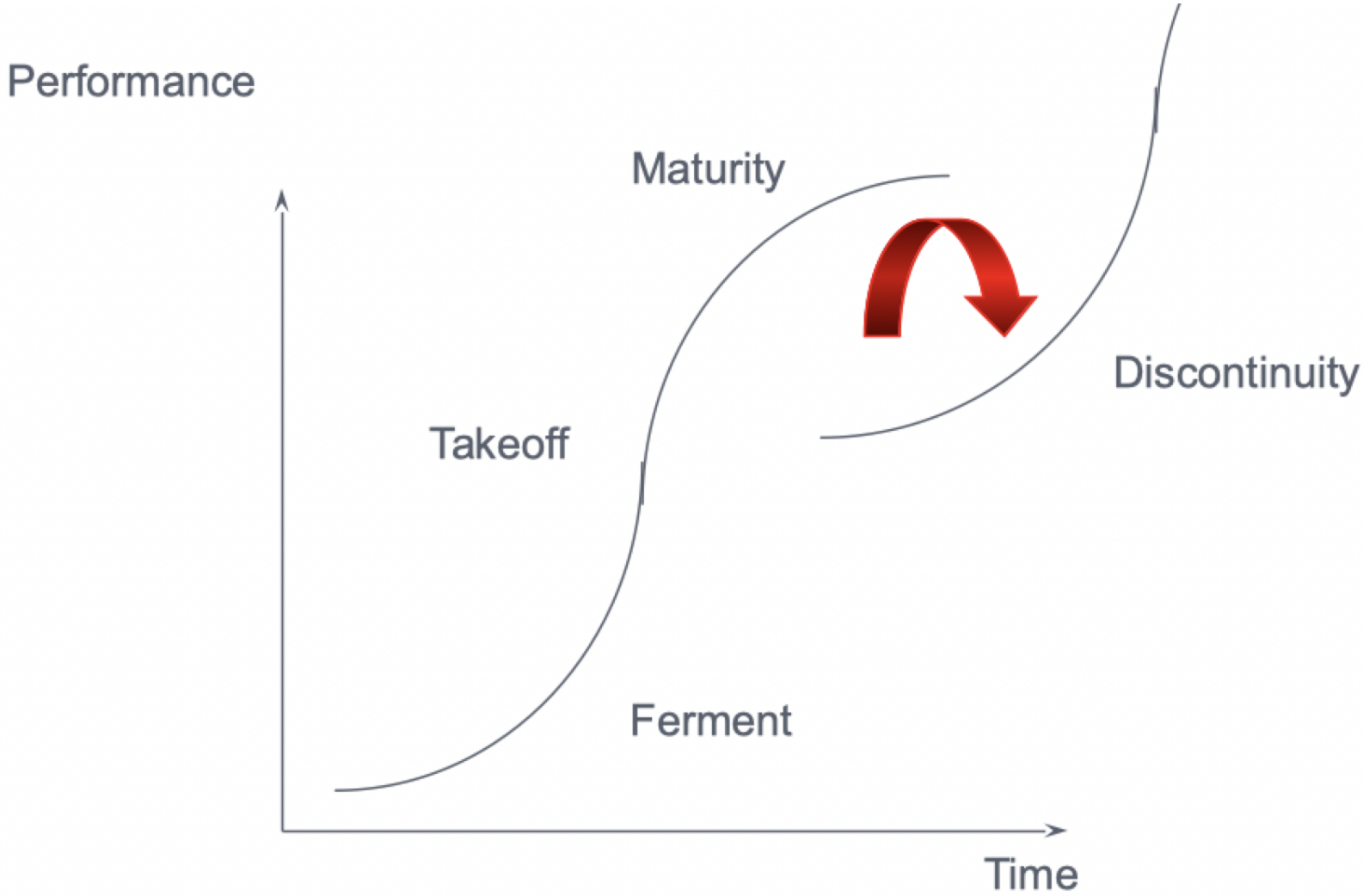
Diffusion of CT Scanners by Hospital Size



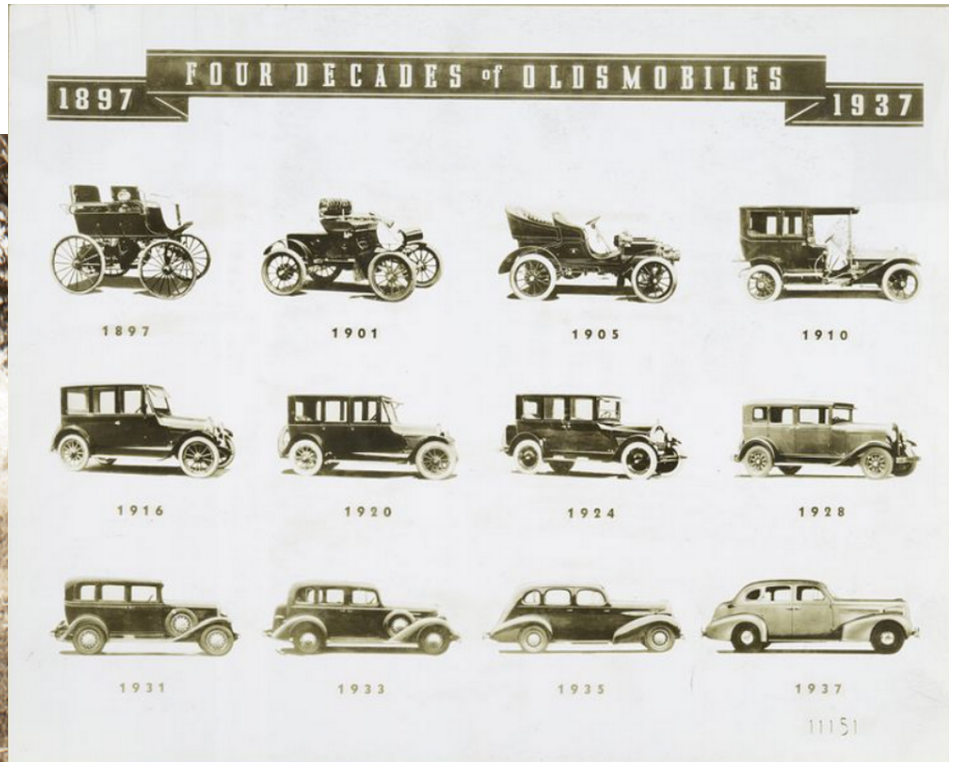
Example 1: The CT Scanner

- EMI & the CT Scanner
  - US demand dropped dramatically
  - Saturation level of 6/million people nearly reached by 1981
  - Major price competition with 12 competitors at the peak
  - Hounsfield receives Nobel Prize in 1979
  - EMI taken over by Thorn Electric in response to cash crisis
  - GE buys Medical Division
- Difficult to forecast demand even when tremendous value is created!

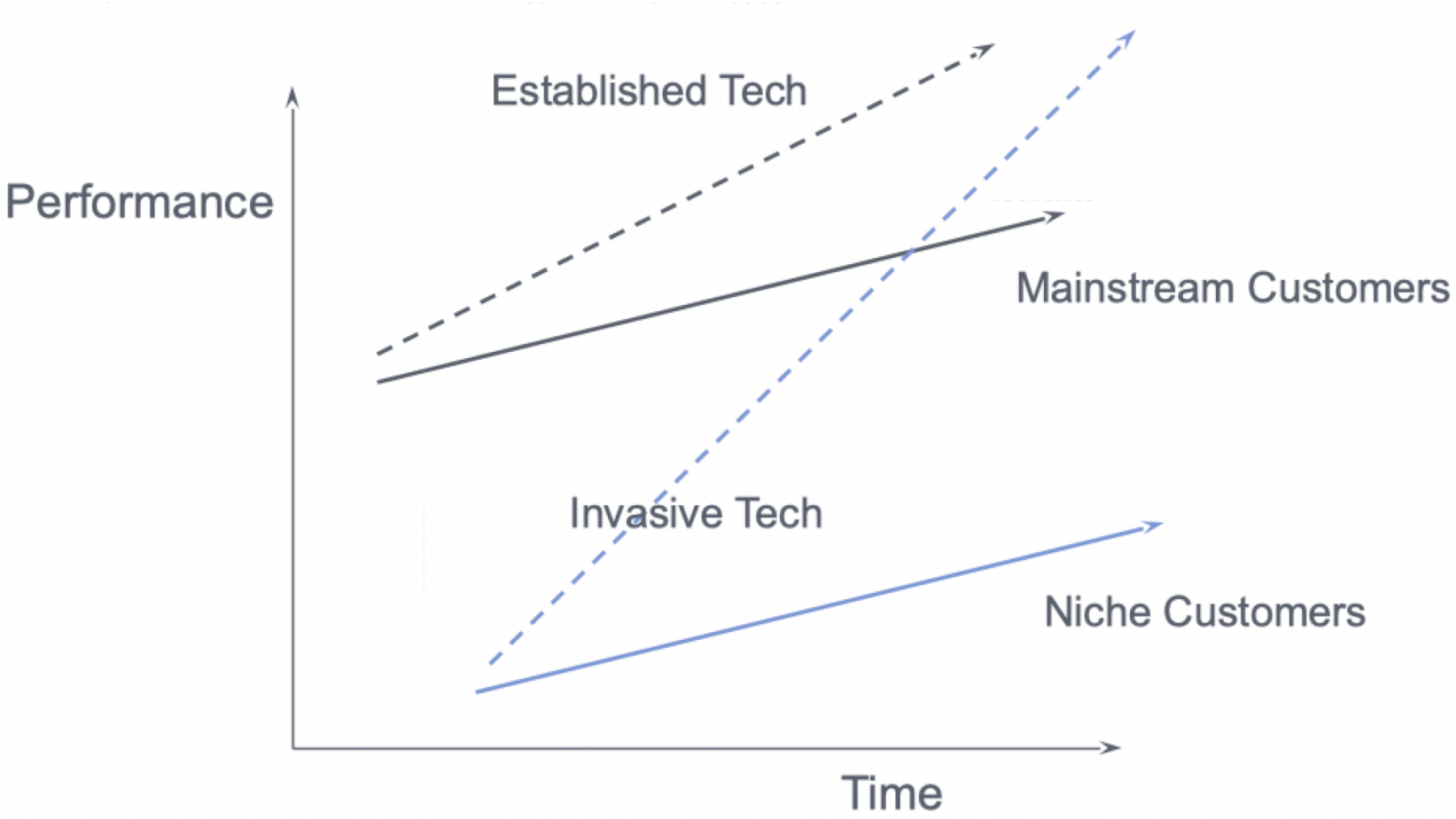
Industry Life Cycle as an S curve



Example 2: Buggies and Cars



Christensen: Listen Closely to Your Customers??



Managerial Implications

- The Chasm (Moore, 1991)
  - "Enthusiasts": want something new, want to play with it
  - "Pragmatists": want something that works
  - Huge gap between early adopters and "majority"
- Pioneer innovators face difficulties riding the diffusion curve
  - Commercializing in-house is difficult
  - Firm faces greatest competition precisely when adoption 'takes-off'
  - Make it difficult for entrants to copy

Capturing Value From an Innovation

- Obstacle 1: Difficulty of trading
  - Selling, licensing
- Obstacle 2: Need for complementary assets
  - Rents go to those who have them!
  - e.g. entertainment industries

Intangibles vs Tangibles

Characteristics	*Know-how/IP*	*Physical Commodities*
Disclosure of Attributes	***Relatively difficult***	***Relatively easy***
Property Rights	***Limited***	***Broad***
Item of Sale	***License***	***Measurable unit***
Variety	***Heterogeneous***	***Homogeneous***
Unit of Consumption	***Often unclear***	***Weight, volume, etc.***
Inherent tradability	***Low***	***High***

Potential Sources of Appropriability

- Intellectual property protection
  - Patents
  - Copyrights
- Secrecy
  - Trade secrets
  - Non-compete clauses
  - Complexity and "tacit" knowledge
- Speed

Assess Control of Complementary Assets

- Suppose the innovation was developed by external start-up team
  - Would the start-up consider you the ideal partner?
  - Or a potential competitor?
- Firm controls stage-specific assets if first is true
  - Examples?

Wrap-Up

- Enormous difficulty of forecasting demand
- Innovator
  - Capturing short run: IP
  - Capturing long run: Complementary assets