Innovation Management

Innovation Strategies
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Session Plan

- Leadership or Follower Strategy?
- Limits of Rational Planning
- Influence of National Systems
- Firm-level processes & capabilities
Innovation Strategy

The purpose of this session is:

- To examine the limitations of the rational planning approach to strategy
- To highlight the differences between Innovation leadership and Followership
- To give an understanding of the respective roles of firm specific knowledge or capabilities, and national innovation systems, in the formulation and execution of an innovation strategy
Key concepts

- Firm-specific knowledge is an essential feature of competitive success
- Corporate strategy should therefore include an innovation strategy, the purpose of which is deliberately to accumulate and exploit such firm-specific knowledge
- Exploitation or exploration
The “rationalist” approach to strategy

- Linear model of rational action

Appraise → Determine → Act
Incrementalist strategy

- This approach argues that the complete understanding of complexity and change is impossible.
- It employs a step-by-step, "trial and error" method, allowing for changing objectives and plans.
Incrementalist procedure

1. Make deliberate steps towards the stated objective
2. Measure and evaluate the effects of the steps
3. Adjust (if necessary) the objective and decide on the next step
Rationalist or incrementalist strategies for innovation?
Limitations of the rational planning:

- Focus on with competitors, not customers
- Difficult to identify internal strengths & weaknesses
- Strategic objectives do not match internal capabilities
- The environment is often complex & uncertain
Competitor Analysis

Example: Five 'forces' analysis of competitive environment:

- rivalry amongst existing competitors
- threat of new entrants
- threat of substitute products & services
- power of suppliers
- power of customers
Porter’s “rationalist” framework

- Underestimates the power of technological change to upset established market and competitive conditions
- Overestimates the influence that managers actually have over corporate choice of technology strategy
Implications for management

Given change and uncertainty, managers should:
- explore the implications of a range of possible future trends;
- ensure broad participation, informal channels of communication, debate and scepticism;
- expect to modify plans late
- managers should recognise that there are no simple recipes
Blue Ocean Strategy

W. Chan Kim

Renee Mauborgne
Blue Ocean Innovation strategies

- Create uncontested market space, rather than compete in existing market space
- Make the competition irrelevant, rather than beat competitors
- Create & capture new demand, rather than fight for existing markets and customers
- Break the traditional value/cost trade-off: Align the whole system of a company's activities in pursuit of both differentiation and low cost
Red Ocean vs. Blue Ocean Strategy

- The big difference in Red Oceans and Blue Oceans is the strategy.
- Red Ocean companies took a conventional approach of trying to beat the competition.
- Blue Ocean companies didn’t use the competition as a benchmark, but instead used value innovation.
Value Innovation: The Cornerstone of Blue Ocean Strategy

- Value Innovation - instead of focusing on beating the competition, focus on making the competition irrelevant by creating a leap in value for buyers and your company, thereby opening up new and uncontested market space.
Value-Cost Trade Off

- Red Ocean companies tend to choose between low cost and differentiation.
- Blue Ocean companies aim for both simultaneously.
Value Innovation: The Cornerstone of Blue Ocean Strategy

The Simultaneous Pursuit of Differentiation and Low Cost
Cirque du soleil
Innovation leadership

- Where firm aims at being first to market, based on technological leadership

- This requires:
  - Strong corporate commitment to creativity and risk taking
  - Close linkages both to major source of knowledge and to customers needs
Innovation followership

- Where firms aim at being late to market, based on imitating from the experience of technological leaders

- This requires:
  - Strong commitment to competitor analysis, to reverse engineering and cost cutting
Pioneer’s Advantage/
The First Mover Advantage

- Pioneering new markets is expensive and risky, but potentially very rewarding because market pioneers enjoy advantages based on **early market entry**.

- Pioneers are more likely to:
  - Have high market share,
  - Survive longer
  - Be market leaders in their product category
Session Plan

- Leadership or Follower Strategy?
- Limits of Rational Planning
- Influence of National Systems
- Firm-level processes & capabilities
What are first-mover advantages?
Sources of Pioneer’s Advantage

- Technological leadership
  - Learning or experience curve
  - Patent
- Preemption of scarce assets
- Switching cost
- Buyer choice under uncertainty

Lieberman and Montgomery, 1988
Switching Costs

- Switching costs impose additional costs on customers who shift to a substitute product relative to staying with the familiar brand
  - Buyers develop brand specific knowledge – e.g., software
  - Seller develops buyer-specific knowledge or after-sales service – e.g., consulting firms
  - Repeated use discounts – e.g., frequent fliers, frequent clients (law services), frequent video rentals, ...
Sources of Pioneer’s Advantage (cont’d)

- Consumer-based Entry Barriers
  - When consumers successfully use the first product, they will continue to favor it because they know it works.
  - The pioneer influences how consumers evaluate attributes and may become the standard for the product category.
  - The pioneer may be able to lock-in consumers by creating high switching costs.
Advantages of being first to market:

- reputation as a pioneer
- capture market share
- early learning curve benefits
- definition of standards
- establish entry barriers (eg patents)
- dominate supply & distribution chains
- earn ‘monopoly’ profits
Forces Against the Pioneer Advantage

- **Free-rider effect**: competitors introduce the same technology with lower costs.
- **Technological discontinuities**: late entrant uses superior technology to produce a better product.
- **Shifts in consumers’ tastes**: the late entrants adopt new positioning before pioneers.
- **Incumbent inertia**: pioneer is deterred from making the investments necessary to remain a market leader.
Question

Does there truly exist the first mover advantage?
## First-Mover Advantages and Disadvantages

<table>
<thead>
<tr>
<th>Product</th>
<th>First Mover</th>
<th>Notable Follower(s)</th>
<th>The Winner</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 mm video camera</td>
<td>Kodak</td>
<td>Sony</td>
<td>Follower</td>
</tr>
<tr>
<td>Disposable diaper</td>
<td>Chux</td>
<td>Pampers, Kimberly Clark</td>
<td>Follower</td>
</tr>
<tr>
<td>Float glass</td>
<td>Pilkington</td>
<td>Corning</td>
<td>First mover</td>
</tr>
<tr>
<td>Groupware</td>
<td>Lotus</td>
<td>AT&amp;T</td>
<td>First mover</td>
</tr>
<tr>
<td>Instant camera</td>
<td>Polaroid</td>
<td>Kodak</td>
<td>First mover</td>
</tr>
<tr>
<td>Microprocessors</td>
<td>Intel</td>
<td>AMD, Cyrix</td>
<td>First Mover</td>
</tr>
<tr>
<td>Microwave</td>
<td>Raytheon</td>
<td>Samsung</td>
<td>Follower</td>
</tr>
<tr>
<td>Personal computer</td>
<td>MITS (Altair)</td>
<td>Apple, IBM</td>
<td>Followers</td>
</tr>
<tr>
<td>Personal computer operating system</td>
<td>Digital Research</td>
<td>Microsoft (MS-DOS)</td>
<td>Follower</td>
</tr>
<tr>
<td>Spreadsheet software</td>
<td>VisiCalc</td>
<td>Microsoft (Excel), Lotus</td>
<td>Followers</td>
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<tr>
<td>VCR</td>
<td>Ampex/Sony</td>
<td>Matsushita</td>
<td>Follower</td>
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<tr>
<td>Video game console</td>
<td>Magnavox</td>
<td>Atari, Nintendo</td>
<td>Follower</td>
</tr>
<tr>
<td>Web browser</td>
<td>NCSA Mosaic</td>
<td>Netscape, Microsoft (Internet Explorer)</td>
<td>Followers</td>
</tr>
<tr>
<td>Word processing software</td>
<td>MicroPro (WordStar)</td>
<td>Microsoft (MS Word), Wordperfect</td>
<td>Followers</td>
</tr>
<tr>
<td>Workstation</td>
<td>Xerox Alto</td>
<td>Sun Microsystems, Hewlett-Packard</td>
<td>Followers</td>
</tr>
</tbody>
</table>
It depends.
Pioneering new markets is expensive and risky, but also potentially very rewarding.
If pioneers have advantages in
  Supplies
  Costs
  Information
  Product quality
  Product line breath
  Distribution,
Firms may benefit from early entry.
Answer (cont’d)

- If late entrants can leapfrog pioneers with:
  - Superior technology
  - Better product quality
  - Better customer service
  - Better brand image,
  Firms could be better off entering late.

The logic of success is not to be first to enter the market, but to strive for market leadership by scanning opportunities, building on strengths, and committing resources to customers effectively.
How firms achieve and sustain competitive advantage?
The dynamic capabilities of firms

- The firm’s ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments
Capabilities Approach

Key factors in innovation strategy:

- *position* of the firm - competitive and national positions

- organizational and managerial *processes* to integrate & exploit competencies within & betw

- technological *paths* open to the firm, given its competencies
National system of innovation

- National systems of innovation clearly influence the rate and direction of innovation
Positions - national factors

1. National demand
2. Competitive rivalry
3. Competencies in production and research
Positions – National demands

- Strong local ‘demand pull’ for certain types of product, generates innovation opportunities for local firms
  - Local (private and public) investment activities
  - Local production input prices
  - Local natural resources
  - Social concerns and pressure on the environment
Positions – Competitive rivalry

- Local demands alone do not create the necessary conditions for innovation
- Competitive rivalry stimulates firms to invest in innovation and change
Positions – Competencies in production and research

- R&D laboratories actively seek support, knowledge and skills from national basic research activities like those in universities
Paths

Marked differences amongst sectors in technological opportunities and market demands are central to corporate choices about:

- technological trajectories
- firm-specific competencies
- innovation strategies.
Technological trajectories

- Size of innovating firms
- Type of product made: price sensitive or performances sensitive
- Objectives of innovation: product innovation or process innovation in steel; and both in automobiles
- Sources of innovation: supplier, customers or basic research
- Locus of own innovation
Paths - firm-specific competencies

“A harmonized combination of multiple resources and skills that distinguish a firm in the marketplace” (Prahalad and Hamel, 1990)
Paths - capabilities & innovation

Characteristics of competencies:

- firm-specific, idiosyncratic
- significant benefit or value to customers
- take time to develop
- sustainable as difficult to imitate or acquire
- unique configurations of resources
- strong tacit content & socially complex

Source: Hall (2000)
Processes - Knowledge

Key organizational issue is how to balance conflicting requirements:

- to identify & develop specialized knowledge within technologies & markets

- to exploit this knowledge by integrating across technologies & markets
Innovation Process

Generic phases of the innovation process:

• Searching & scanning the internal & external environments

• Filtering & selecting potential opportunities

• acquiring the technical, financial & market resources

• implementing development & commercialisation

• reviewing & learning from experience
Innovation Process

Factors affecting the *precise* process:

- **Sector** - competitors, structure & constraints
- **Markets** - opportunities & rate of change
- **Technology** - maturity & costs
- **Resources** - firm & networks
- **Location** - regulation, policy & systems of innovation
Conclusions: Innovation Strategy

Conclusions and implications from observation and research:

- National context influences, but does not determine the rate and direction of innovation at the firm level.

- Dynamic capabilities and firm-level processes contribute to the development and growth of firms.
Conclusions: Innovation Strategy

- The elements of national systems of innovation interact to influence the degree and direction of innovation in a country.
- The uneven global distribution of innovation demands global search strategies for the development & commercialization of innovation.
- The position of a firm in an international value chain will constrain the opportunities for innovation and entrepreneurship.