

Economics of Strategy

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Chapter 5

Diversification

Slide show adapted on the basis of
that prepared by

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Why Diversify?

- Most well known firms serve multiple product markets
- Diversification across products and across markets can be due to economies of scale and scope
- Diversification that occur for other reasons tend to be less successful

Measuring Diversification: relatedness 1

“relatedness” concept was developed by Richard Rumelt (1974)

- Two businesses are *related* if they share technological characteristics, production characteristics and/or distribution channels

Measuring Diversification: relatedness 2

- A *single business firm* derives more than 95 percent of its revenues from a single activity (examples: KLM-airlines, DeBeers-diamonds, Wrigley-chewing gum)
- A *dominant business firm* derives 70 to 95 percent of its revenues from its principal activity (examples: New York Times, Glaxo-Smith-Kline)

Measuring Diversification: relatedness 3

- A *related business firm* derives less than 70% of its revenue from its primary activity, but its other lines of business are related to the primary one (ex.: Nestlé, Daewoo, Phillip Morris)
- An *unrelated business firm* or a *conglomerate* derives less than 70% of its revenue from its primary area and has few activities related to the primary area (ex. ITT)

Measuring Diversification: relatedness 4

Type	Proportion of Revenue from Primary Activity	Examples
Single	> 95 percent	KLM, DeBeers
Dominant	70 to 95 percent	N. Y. Times, 3M
Related	< 70 percent	Philip Morris
Conglomerate	<70 percent	ITT, Beatrice

Conglomerate Growth After WW II

Rumelt (1974) shows:

- From 1949 to 1969, the proportion of single and dominant firms dropped from 70 percent to 36 percent
- Over the same period, the proportion of conglomerates increased from 3.4 percent to 19.4 percent (increase in diversification)

Measuring Diversification: Entropy

- Entropy measure of diversification:

$$E = \sum_{i=1}^n z_i \ln \left(\frac{1}{z_i} \right)$$

where z_i = proportion of a firm total sales in line of business i

- If a firm is exclusively in one line of business (pure play), its entropy is zero
- For a firm spread out into 20 different lines equally, the entropy is about 3

Entropy Decline in the 1980s

Study by Davis, Dieckman, Tinsley (1994):

→ During the 80s, the average entropy of Fortune 500 firms dropped from 1.0 to 0.67

Study by Comment and Jarrell (1995):

→ Fraction of U.S. businesses in single business segments increased from 36.2% in 1978 to 63.9% in 1989

→ Firms have become more focused in their core businesses

Measuring Diversification: M&A analysis

- Firms can diversify in different ways
 - They can develop new lines of business internally
 - They can form joint ventures/alliances in new areas of business
 - They can acquire firms in related/unrelated lines of business (M&A)

Merger Waves in U.S. History

- First wave that created monopolies like standard oil and U.S. Steel (1880s to early 1900s)
- The merger wave of the 1920s that created oligopolies and vertically integrated firms
- The merger wave of the 1960s that created diversified conglomerates

Merger Waves in U.S. History

- The merger wave of the 1980s when undervalued firms were bought up in the market place (emergence of leveraged buyout)
- The most recent wave of the mid 1990s in which firms were pursuing increased market share and increased global presence by merging with “related” businesses

Measuring Diversification: conclusions

- Increased diversification to the late '60s and reduced diversification after 1990

Why do Firms Diversify?

- Efficiency based reasons that benefit the shareholders (and related costs)
- Managerial reasons for diversification

Why do Firms Diversify?

- Efficiency based reasons that benefit the shareholders
 - a) Economies of scale and scope
 - b) Economizing on transactions costs
 - c) Financial Synergies

Economies of Scope 1: related activities

- The idea is that it is less costly or more valuable to consumers for two activities to be pursued jointly than separately (see lecture on horizontal integration for formal definition).
- Economies of scope might arise because of relatedness among products in terms of: raw materials and/or technology and/or output markets

Economies of Scope 2: related activities

- If firms pursue economies of scope through diversification, large firms should be expected to sell related set of products in different markets
- Evidence (Nathanson and Cassano-1982 study) indicates that this happens only occasionally: several firms produced unrelated products and served unrelated consumer groups

Economies of Scope 3: unrelated activities

- Firms that produce unrelated products and serve unrelated markets could be pursuing scope economies in other dimensions
- Two explanations that take this approach are
 - Resource based view of the firm (Penrose)
 - Dominant general management logic (Prahalad and Bettis)

Economies of Scope 4: unrelated activities

- Penrose: utilize managerial and organizational resources in new areas when growth in existing market is constrained
- Dominant general management logic (Prahalad and Bettis): management has specific skills that can be applied in different areas of activity (not convincing)

Economizing on Transactions Costs

- If transactions costs complicate coordination, merger may be the answer
- Transactions costs can be a problem due to specialized assets such as human capital (hold up problem etc.)
- Market coordination may be superior in the absence of specialized assets
- Trade-off with internal agency and influence costs

The University as a Conglomerate

- An undergraduate university is a “conglomerate” of different departments
- Economies of scale (common library, dormitories, athletic facilities) dictate common ownership and location
- Value of one department’s investments depends on the actions of the other departments (relationship specific assets)

Financial synergies

- Internal capital markets
- Shareholder's diversification
- Identifying undervalued firms

Financial synergies: Internal Capital Markets

- In a diversified firm, some units generate surplus funds that can be channeled to units that need the funds (Internal capital market)
- The key issue is whether the firm can do a better job of evaluating its investment opportunities than an outside banker can do
- Internal capital market also engenders influence costs

Financial synergies: Diversification and Risk

- Diversification reduces the firm's risk and smoothens the earnings stream
- But the shareholders do not benefit from this since they can diversify their portfolio at near zero cost.
- Only when shareholders are unable to diversify (as in the case of owners of a large fraction of the firm) do they benefit from such risk reduction

Financial synergies: Identifying Undervalued Firms

- When the target firm is in an unrelated business, the acquiring firm is more likely to have overvalued the target
- The key question is: “Why did other potential acquirers not bid as high as the ‘successful’ acquirer?”
- Winner’s curse could wipe out any gains from financial synergies

Cost of Diversification

- Diversified firms may incur substantial influence costs: Meyer, Milgrom, Roberts (1992) highlight both direct costs of internal lobbying and the costs from misallocations of resources.
- Diversified firms may need elaborate control systems to reward and punish managers (agency costs)
- Internal capital markets may not function well

Cost of Diversification: Internal Capital Market in Oil Companies

- If internal capital markets worked well, non-oil investments should not be affected by the price of oil. Lamont (1997) found on the contrary that investments in non-oil subsidiaries fell sharply after the drop in oil prices.
- Managerial reasons may dominate the investment decisions

Managerial Reasons for Diversification

- Growth may benefit managers even when it does not add value for the shareholders
- When growth cannot be achieved through internal development, diversification may be an attractive route to growth
- When related mergers were made difficult by law, conglomerate mergers became popular

Managerial Reasons for Diversification

Managers might pursue diversification for:

- Social prominence and public prestige (Jensen)
[difficult to assess]
- Increase in compensation (Reich)
[mixed evidence]
- Managers may feel secure if the firm performance mirrors the performance of the economy (which will happen with diversification)

Problems of Corporate Governance

- Previous analysis show that there are gains for shareholders from monitoring management
- This is difficult, however
- Empirical evidence shows that acquiring firms tend to experience loss of value. Negative effects on value are more severe when the CEO's stock holding is small

Market for Corporate Control

Given the principal-agent problem within the firm, is there any other method to limit management deviation from pursuing shareholders' interest?

- Publicly traded firms are vulnerable to hostile takeovers (Manne, 1965)
- If managers undertake unwise acquisitions, the stock price drops, reflecting
 - Overpayment for the acquisition
 - Potential future overpayment by the incumbent management

Market for Corporate Control

- Difference between the *actual* and *potential* share price presents an opportunity for another entity to try a takeover.

Market for Corporate Control

- Free cash flow (FCF) = cash flow in excess of profitable investment opportunities
- Managers tend to use FCF to expand their empires
- Shareholders will be better off if FCFs were used to pay dividends

Market for Corporate Control

- In an LBO, debt is used to buy out most of the equity
- Future free cash flows are committed to debt service
- Debt burden limits manager's ability to expand the business

Market for Corporate Control - Evidence

- Hostile takeovers tend to occur in declining industries and industries experiencing drastic changes where managers have failed to readjust scale and scope of operations
- Corporate raiders have profited handsomely for taking over and busting up firms that pursued unprofitable diversification

Market for Corporate Control

Shleifer and Summers (1988) show that LBOs might be bad for long run economic efficiency :

- LBOs may hurt other stakeholders
 - Employees
 - Bondholders
 - Suppliers
- Wealth created by LBO may be quasi-rents extracted from stakeholders (hold up problem)
- Redistribution of wealth may adversely affect long run economic efficiency

Market for Corporate Control

- Takeovers that simply redistribute wealth (rather than generating also gains in operating performance) are rational from the point of view of the acquirers but sacrifice long run efficiency
- Employees and other stakeholders will be reluctant to invest in relationship specific assets
- Purely redistributive takeovers will create an atmosphere of distrust and harm the economy as a whole

Market for Corporate Control

- Possible reasons for the end of the LBO merger wave
 - Use of performance measures such as Economic Value Added (EVA) that forces an accounting for the costs of capital
 - Increased ownership stakes by the CEO
 - Monitoring by large shareholders (pension funds)
- The Shleifer-Summers argument stress that MCC is a costly way for monitoring managers

Evidence: Diversification and Operating Performance

In these studies operating performance is usually measured as accounting profits or as productivity. Major results are:

- Unrelated diversification harms productivity
- Diversification into narrow markets does better than diversification into broad markets

Evidence: Valuation and Event Studies

Valuation studies: compare stock market valuations of diversified to those of undiversified firms

→ shares of diversified firms trade at a discount relative to those of their undiversified counterparts (up to 15%): “diversification discount”

Evidence: Valuation and Event Studies

Why?

a) Combining two unrelated businesses reduces value in some way

or

b) Unrelated businesses elected to combine had low market values even before the combination

→ Recent empirical evidence shows that b) might be motivation, at least partly

Evidence: Valuation and Event Studies

- **Event studies**: reaction of the stock market to the announcement of diversifying events (implicit assumption of stock mrkt efficiency)
 - a) negative change for acquirers on average
 - b) positive change for target firm
 - c) b) is bigger in absolute value than a)
 - d) acquirers have greater returns when the target firm is “related”

Evidence: Diversification and Long Term Performance

- Long term performance of diversified firms appear to be poor
- One third to one half of all acquisitions and over half of all new business acquisitions are eventually divested (Porter, 1987 – 33 major diversified firms between 1950 and 1986)
- Corporate refocusing of the 1980s could be viewed as a correction to the conglomerate merger wave of the 1960s (Shleifer and Vishny, 1991)

Evidence: Summary

- Diversification can create value, although its benefits relative to non-diversification are unclear
- Diversifications in related activities outperform those in unrelated activities