

What in the World is Competitive Advantage?

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In recent years the concept of competitive advantage has taken center stage in discussions of business strategy. Statements about competitive advantage abound, but a precise definition is elusive. In reviewing the use of the term competitive advantage in the strategy literature, the common theme is value creation. However, there is not much agreement on value to who, and when.

According to one school of thought, value is created by favorable terms of trade in product markets. That is, sales in which revenues exceed costs. However, scrutiny of the concept of “cost” quickly reveals problems. What is the “cost” of a scarce resource?

Another school of thought holds that advantage is revealed by “super-normal” returns. Again, questions quickly arise. Internal returns are normally measured by some type of market-book ratio. Such ratios include return on capital¹, return on assets, market-to-book value, and Tobin’s Q. Given such a measure, are supernormal returns “super” relative to the expectations of owners, the economy as a whole, or the rest of the industry?

A third school of thought ties advantage to stock market performance. According to financial economics, superior stock market performance stems from surprising increases in expectations. Thus, after 9/11, the stocks of defense companies rose dramatically. Does this signal competitive advantage?

To illustrate various approaches to these issues, I summarize below a variety of thoughts on the subject by important contributors.

- Porter says “competitive advantage is at the heart of a firm’s performance in competitive markets” and goes on to say that purpose of his book on the subject is to show “how a firm can actually create and sustain a competitive advantage in an industry—how it can implement the broad generic strategies.” Thus, competitive advantage means having low costs, differentiation advantage, or a successful focus strategy. In addition, Porter argues that “competitive advantage grows fundamentally out of value a firm is able to create for its buyers that exceeds the firm’s cost of creating it.”
- Peteraf [1993] defines competitive advantage as “sustained above normal returns.” She defines imperfectly mobile resources as those that are specialized to the firm and notes that such resources “can be a source of competitive advantage” because “any Ricardian or monopoly rents generated by the asset will not be offset entirely by accounting for the asset’s opportunity cost” (i.e., its value to others).
- Barney [2002: 9] says that “a firm experiences competitive advantages when its actions in an industry or market create economic value and when few competing firms are engaging in

¹ Each of this measure mixes market prices with historical costs in a different way. All omit the “cost” of some scarce intangible assets.

- similar actions.” Barney goes on to tie competitive advantage to performance, arguing that “a firm obtains above-normal performance when it generates greater-than-expected value from the resources it employs. In this final case, the owners of resources think they are worth \$10, and the firm creates \$12 in value using them. This positive difference between expected value and actual value is known as an economic profit or an economic rent.”
- Ghemawat and Rivkin [1999: 49] say that “A firm such as Nucor that earns superior financial returns within its industry (or its strategic group) over the long run is said to enjoy a competitive advantage over its rivals.”
 - Besanko, Dranove, and Shanley [2000: 389] say “When a firm earns a higher rate of economic profit than the average rate of economic profit of other firms competing within the same market, the firm has a competitive advantage in that market.” They also carefully define economic profit [1999:627] as “the difference between the profits obtained by investing resources in a particular activity, and the profits that could have been obtained by investing the same resources in the most lucrative alternative activity.”
 - Saloner, Shepard and Podolny say that “most forms of competitive advantage mean either that a firm can produce some service or product that its customers value than those produced by competitors or that it can produce its service or product at a lower cost than its competitors.” They also say that “In order to prosper, the firm must also be able to capture the value it creates. In order to create and capture value the firm must have a sustainable competitive advantage.”
 - John Kay [1993: 14] defines distinctive capabilities as ones derived from characteristics that others lack and which are also sustainable and appropriable. “A distinctive capability becomes a competitive advantage when it is applied in an industry or brought to a market.” Kay [p. 194] measures the value of competitive advantage as valued added, with the costs of physical assets measured as the cost of capital applied to replacement costs.
 - Dierickx and Cool [1989: 1059] have echoed Barney [1986] in arguing that competitive advantage is not obtainable from freely tradeable assets. “if a privileged product market position is achieved or protected by the deployment of scarce assets, it is necessary to account for the opportunity cost of those assets. Many inputs required to implement a strategy may be acquired in corresponding input markets. In those cases, market prices are indeed useful to evaluate the opportunity cost of deploying those assets in product markets. However, the deployment of such assets does not entail a sustainable competitive advantage, precisely because they are freely tradeable.”
 - Brandenberger and Stuart [1996] discuss multi-agent games (industries) and examine the conditions under which players can appropriate a portion of the total gains to trade. Agents include buyers, suppliers, and producers. Total gains to trade are maximum available from the assignments among agents. They conclude that the maximum value appropriated is limited by the agent’s value added to the game—the amount the game’s total value is increased by the agent’s presence. In addition, “To have a positive added value it must be ‘different’ from its competitors enjoying a favorable asymmetry . . .”
 - Various strategy consulting firms measure competitive advantage in terms of shareholder returns.

Areas of Confusion

There are four areas of disagreement and/or confusion among these viewpoints: (1) There is confusion or disagreement about how value is to be conceptualized or measured (gains to trade, value to owners, increases in value to owners); (2) There is confusion about the meaning of rents; (3) There is disagreement or confusion about the appropriate use of the opportunity cost concept; (4)

There is disagreement or confusion about whether competitive advantage means winning the game or having enough distinctive resources to maintain a position in the game.

There is no known reconciliation of these conceptual difficulties. A reasonable measure of competitive advantage would:

- Be resistant to re-capitalization. If Dell has a competitive advantage, that advantage should persist despite its sale to another firm at fair market value.
- Not be subject to the factor-price fallacy. (see below).

The Factor Price Fallacy²

Consider two pharmaceutical firms, each earning \$100 million in profit. Both have the same market capitalization. Firm X's profits are attributed to its portfolio of patents. Firm Y's profits are attributable to its organizational acumen and managerial skills. According to standard neo-classical doctrine, firm X's economic profits are zero because they are due to valuable factors (patents) which could be sold or rented instead of used in the business. That is, its profits are not profits but rents, which are "absorbed" by the factors which produce them. Firm Y, on the other hand, seems to have an economic profit because its valuable resources are not priced in factor markets.

Are we to actually define competitive advantage in a way such that firm Y has it and firm X does not? What if a wholly new market mechanism made firm Y's skills marketable and priced; would that "hurt" the firm's ability to compete or diminish its value? The problem here is not with the idea of advantage, but with the ideas of cost and profit! The truth is that neoclassical economic profit is a chimera; the only source of wealth in the economy is the ownership of valuable factors, whether priced or un-priced in factor markets. High rates of return are attributable to scarce intangible resources. Whether or not they are priced or tradeable does not affect the payment streams they garner. Owning a useful scarce resource is a good thing, and making the payments it receives even higher is a good thing. And it is an even better thing if the resource is priced and saleable.

The Test

To explore some of the issues that must be resolved by a consistent approach to competitive advantage, I have prepared a short (open book) diagnostic test (Exhibit A). Take this test and discover which issues give you pause and which you feel sure about. Along the way, see which of the arguments advanced by the authorities quoted above are helpful.

Conclusion

The strategy area is in need of a clear definition of competitive advantage, or it needs to stop employing a concept that cannot be defined. The question, "What is Competitive Advantage?" needs an answer.

² See Lippman and Rumelt [2003] for a complete discussion.

The Competitive Advantage Test

1. Firm **A** owns a single asset: a vault filled with silver. Does this firm have a competitive advantage in the silver business? **Y** **N**
2. Firm **B** owns a single asset: the world's only silver-doodle. It is a high tech machine obtained from a passing UFO. It operates without any perceptible need for inputs and produces one kilogram of silver per minute. Does this firm have a competitive advantage in the silver business? **Y** **N**
3. Firm **C** owns a silver mine and a silver mining company. The silver mine has an unusually rich vein of ore. Because of the quality of the mine, the monetary costs of operating the mine, per pound of silver obtained, at its efficient rate of output, are lower than those of any other mine in the world. Its mining operations are of ordinary efficiency, given the quality of the ore. The firm earns a profit. Does this firm, as a whole, have a competitive advantage? **Y** **N**
4. Firm **D** operates in the silver mining business. It rents access to silver mines owned by others and rents the equipment it uses. It has a very low operating cost per pound of silver obtained because its workforce has a high level of learned expertise at organizing and carrying out mining operations in certain kinds of geologic situations. It owns no physical assets and earns a profit. Does this firm have a competitive advantage in the silver mining business? **Y** **N**
5. Firm **F** owns the Valley Mill, a specialized steel rolling mill that cost \$100 million to build in 1969. The Valley Mill³ was the only mill in the industry designed just to make strong light very wide sheet for the largest U.S. automobiles. Filled to capacity when it opened, the energy crises of the 1970s crushed demand and left it as the sole producer in its segment, operating at only 20 percent of its capacity. Its cash cost per unit, including maintenance, remained much lower than that of any less specialized mill. However, its after-tax return on invested capital was only 2 percent in 1980. The net salvage value of the plant was zero. Did the Valley Mill have a competitive advantage in its business in the early 1980s? **Y** **N**
6. Five firms compete in a narrow stable industry selling branded food products. Firm **H**'s after-tax return on invested capital is 15 percent, above the norm for all industrial firms, but lower than the returns of the other four firms in this particular market. Its business is based on a high-quality product and a well-recognized brand name, appealing to a small group of buyers. None of the firms' resources are useful outside of this industry. Does firm **H** have a competitive advantage in this industry? **Y** **N**
7. Firm **J** competes in industry **X** earning after-tax cash profits of 100, which are larger than the profits of any other firm in the industry. If it moved its resources to industry **Y**, firm **J** would increase its profits to 150. Does firm **J** have a competitive advantage in industry **X**? **Y** **N**

Firms **K** and **L** operate in different industries. **K** has 1 unit of capacity and **L** has 3. Their net profits per unit of capacity are 90 and 100 respectively. A new opportunity appears in which both **K** and **L** are the only possible suppliers. There are three buyers in the new market, each having a willingness-to-pay of 120, and each wanting to buy one unit of product. Each unit of capacity is separately and freely movable between uses. Does **K** or **L** have the competitive advantage with respect to the new opportunity? **Y** **N**

³ This example is true: the Valley Mill was a division of one of the major steel companies.

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