

Thirty-five Takeaways

To help you review what is in the textbook, here are thirty-five general takeaways:

1. Porter's five forces—barriers to entry, substitute and complementary products, the power of suppliers, the power of customers, and rivalry within the industry—are largely (but not entirely) about various *relationships* that firms have with one another. And, because the economics of relationships is more nuanced than me-powerful-you-weak-is-good-for-me, understanding the economics of relationships is one key to business strategy.
2. In situations where your welfare is affected by the actions of specific others, while your actions affect them, analyze the situation by trying to understand how each party (you and others) sees the situation. In other words, think through the situation as a game.
3. Cooperation built on reciprocity has several requirements: (a) Each party wants to achieve a cooperative outcome, which starts with good psychology (no beggar-my-neighbor attitudes), but which goes further: each party must see more value in a future of cooperation than in taking maximal immediate advantage. (b) Each party understands the “deal” and his/her part. (c) Each can monitor with minimal noise if the other party (or parties) are compliant. And (d) a noncompliant party can be “punished” by the others, and believes that punishment will follow non-compliance. The Folk Theorem tells us that there can be a multitude of possible cooperative arrangements (that is, equilibria), so cooperation often comes down to finding one that all can agree to and support.
4. Individuals and organizations often face a conflict between their ex ante and ex post interests. The ability to control or restrict one's later options (through choice of technology or cost structure, contractual guarantees, reputation concerns, regulations, or laws) can be a blessing ex ante, if it induces others to act in a way that the first party prefers. Or, put negatively, you may be worse off in a relationship if you have the unfettered

ability to hold-up your relationship partner; in such cases, your partner will not be a very cooperative partner.

In particular, reputation can lend credibility to promises and / or threats, if maintaining that reputation is worth more in terms of the benefits it will bring (later) than it is worth in the short run to fracture it. Beyond this, effective reputations have many of the characteristics of effective bilateral cooperation: clarity about what the reputation precludes is needed, and future potential trading partners must learn by some means whether one currently behaves in conformance with one's reputation or not.

5. For complex transactions that stretch out over time, where it is unclear *ex ante* how the transaction (or relationship) will evolve, the *governance structure*—who has authority to make which decisions—is often the key to how well the transaction proceeds. In general, decisions should be made by the parties with the best information and ability to make the decisions *and* that will be trusted by the others involved.
6. You are not at the top of a hill if the ground under your feet slopes up in one direction or another. By itself, this is not much of an insight, but it should remind you to *think in terms of margins rather than averages*; for instance, think marginal cost and marginal revenue, not average cost and price. And, when you think about marginal cost or marginal revenue, think in terms of the marginal impact of a decision on *all* your revenue and cost terms.
7. A profit-maximizing firm will produce where $MR = MC$.
8. The profit-maximizing level of production is generally greater than the level of production at which profit per unit, or profit margin, is maximized, because you “make it up in volume.”
9. When marginal anything is less than the average so far, it will cause the average to decrease. When it exceeds the average so far, it will cause the average to increase. So, in particular, at *efficient scale*, where average cost is minimized, $MC = AC$.
10. The level of production that minimizes average costs—*efficient scale*—has no particular connection to the level of production that maximizes profit for a firm with market power.
11. The difference between marginal revenue and price, for a good for which

a single price is charged, is determined by the elasticity of demand: $MR(x) = P(x)(1 + 1/\hat{\nu}(x))$. For a profit-maximizing firm, therefore, the optimal mark-up over marginal cost is driven by the elasticity of demand.

12. Price discrimination based on demand elasticity enlists the idea that, to enhance profits, you want to charge higher prices to customers whose demand is more inelastic and lower prices to customers whose demand is more elastic. (There are also cost-difference reasons for charging different customers different prices.)
13. In marketing a product, each layer in the chain of distribution adds a markup as the organization at that layer extracts its piece of the pie, diminishing both the total amount sold and the amount of benefit obtained by the customer. However, if a manufacturer can charge resellers a fixed fee for the right to buy its product (and resale of the good can be controlled), the manufacturer can control this problem of double- / multi-marginalization.
14. The protection offered under law to franchisees certainly involves interest-group politics to some extent, but it also has a valid economic purpose: It protects the franchisees from being held up after they make sunk-cost investments and, in this way, helps franchisers by inducing franchisees to make those sunk-cost investments.
15. The amount of a good demanded by a consumer relates to the marginal utility that item provides and not the total utility. (But, to the extent that consumers can be faced with entry fees or take-it-or-leave-it offers, the amount of money that can be sucked out of them depends on the total utility they get from a product.)
16. *The bang-for-the-buck principle:* When you maximize or minimize some objective subject to a single constraint, look at the ratios of the marginal impact on the objective of a variable to the marginal impact on the constraint of the same variable. Subject to caveats about nonnegativity constraints, these ratios are equal at the solution of the constrained optimization problem. This principle is the key to solving both the consumer's utility-maximization problem (subject to a budget constraint) and the firm's cost-minimization problem (subject to a production-level constraint).
17. Accounting procedures that involve depreciation are an attempt to measure current "profit flow." Most procedures employed do this imper-

factly, because accounting measures are governed by a general prejudice in favor of conservatism (give accountants no leeway to make things look rosier than they are) and the (auditing) need to be able to reconstruct accounting procedures *ex post*, to be sure that no funny business took place. Also, remember that accounting earnings differ from economic profits in a second important fashion: Accounting earnings do not include a “regular charge” to equity holders for the use of their resources.

18. When current production activities lower future production costs, as in the experience curve or activities such as TQM, “marginal cost” is not the additional current cost for making another unit. At least a portion of current costs is an investment in better technology and should be treated as the investment activity that it is.
19. *Supply equals demand* in competitive markets/industries is not a law of nature. But in more cases than not, if some assumptions are met, it gives a good prediction as to where prices will land and how much good will change hands. The required assumptions are that the good is a commodity, there are lots of (relatively small) buyers and sellers, and all market participants have good information about alternative opportunities to trade. And it depends on the willingness of some market maker to create the market. (The internet has made the transmission of information and the activity of market-making much simpler than in the pre-internet days, so the power of supply-equals-demand as a useful model has been enhanced.)
20. A competitive firm—one that takes the price of its product as something that it cannot change—still employs $MR = MC$ in choosing its production level. But in this case, MR is just the price of the good, so the profit-maximization mantra becomes $p = MC$.
21. Competitive firms with avoidable fixed costs (or with marginal costs that fall and then rise) decide on production quantity in two steps: First, is price high enough so that producing is better than staying out entirely? And if the answer to the first question is yes, then: Where is $p = MC$?
22. When looking for the equilibrium in a competitive market, be sure to consider firms that might not be producing today but that would produce at higher prices.
23. When all potential producers of a good in a competitive market have

access to the same cost structure (technology plus factors of production), and when there are a “lot” of potential producers (measured in terms of the ratio of demand at their minimum average cost to their efficient scale), then the supply-equals-demand price will be that minimum average cost, every active firm will be producing at their efficient scale, and every firm will be making zero *economic* profit.

And to reiterate from the last part of Takeaway #17: Do not confuse *economic* profit with accounting profit. Economic profit includes enough accounting profit to provide equity holders with a market rate of return on their investment.

24. The *invisible hand* of prices in competitive markets (with no externalities) gives an outcome that maximizes total surplus. Consumers buy to the point where the marginal surplus they get equals price, and firms produce to the point where their marginal cost reaches price, so the surplus-maximizing quantity is being produced by the “right” (low-marginal-cost) producers and consumed by the “right” (high-marginal-value) consumers.
25. But total surplus maximization, or *efficiency*, is not the only criterion by which market outcomes should be judged. In particular, the level of *equity* in the distribution of value is important and must be weighed in the balance.
26. And in the case of a firm with market power, the production level is where $MR = MC$, and since MR is less than price, this is less production than the quantity that would maximize total surplus.
27. In competitive markets, government intervention in the form of taxes and subsidies introduces a “wedge” between the prices facing consumers and producers, leading to an inequality between firm’s marginal cost and consumer’s marginal value (surplus), which creates a *deadweight loss* in total surplus. Other forms of government intervention—price floors, price ceilings, tariffs (taxes on foreign producers), and quotas introduce other forms of inefficiency in competitive markets. Moreover, price floors and ceilings can lead to a mismatch of supply and demand, which in turn can lead to black markets (when demand exceeds supply) and discrimination (in labor markets, when supply exceeds demand). Such instruments can have positive distributional consequences, however; and they can enhance efficiency in imperfectly competitive markets or situations with externalities.

28. In a competitive industry, the relative impact of a tax or subsidy on producers and consumers depends on the relative elasticities of supply and demand. Everything else held equal, consumers feel the impact more the more elastic is supply and the more inelastic is demand. But inelastic supply or demand (or both) lessens the deadweight loss associated with a tax or subsidy.
29. When the economic activities of one party directly impact the welfare (utility for consumers, profit for firms) of other parties, an externality is created. Externalities lead to inefficient outcomes in competitive markets, because the marginal social and private values of consumption and/or the marginal social and private costs of production are different. Externalities are dealt with in a variety of ways, including social norms, a better assignment of property rights, and government interventions.
30. Cap-and-trade (or tradable-pollution-license) programs aim at using markets (and supply equals demand) to achieve an efficient allocation of a fixed amount of pollution among the various polluting firms.
31. Faced with choices with uncertain consequences, individuals exhibit a number of “regularities” in how they behave. The expected-utility model captures some of these—in particular risk aversion and diminishing risk aversion as the scale of the gamble decreases—but misses on others. Because it captures these effects, the expected-utility model is used by economists as a descriptive model of individual choice under uncertainty. But it is far from perfect as a descriptive model. (The expected-utility model also has normative uses, covered in Appendix 4 of this *Student’s Companion*.)
32. When individuals are risk averse, risk sharing and spreading are powerful devices for creating value. When a gamble is uncorrelated with other risks people face and is thinly spread, its “value” approaches its average or expected value. When it is positively or negatively correlated with other risks, its value depends on those correlations: Usually, positive correlation decreases value, while negative correlation increases value because of an insurance effect. This story is picked up in the subject of finance, in the form of the capital asset pricing model.
33. A host of factors limit the extent to which the value created by risk sharing or spreading can be enjoyed: Differences of opinion, the need to protect proprietary information, the value of control, adverse selection, and

moral hazard problems all intrude. For organized security exchanges, both legislatively mandated disclosure and voluntary disclosure of audited financial accounting data are vehicles to combat the problems of adverse selection and moral hazard, so that the gains from risk sharing or spreading can be taken advantage of more widely.

34. Hidden information and adverse selection can greatly inhibit markets, especially as the problem of adverse selection is often a vicious cycle: As high-quality goods are pulled off the market, the average quality of the goods that remain falls, so the price buyers are willing to pay falls, causing more high-quality goods to be withdrawn. The cure for adverse selection is information, whether obtained by statute or voluntarily. The key to an effective voluntary signal or screen is that the signal or screen is *relatively cheap* for goods of higher quality, so it separates quality levels.
35. In situations of hidden action or moral hazard, where actions are “obscured” by noise, efficient risk sharing and incentives can become opposed, and a balance must be struck between them. Beyond this fundamental conflict in incentive systems, incentive systems should be evaluated in terms of their dynamic effects, ability to deal with multi-tasking, ability to shield individuals from risks they do not control (via benchmarking or tournaments), and their screening impacts.

The Big Picture

Beyond these specific takeaways is a much more general and, I hope, ultimately more important big-picture takeaway: Learn to think the way an economist thinks: about individuals who act purposefully, pursuing some fairly well-defined goal, with conflicts of interest adjudicated by institutions that reach an equilibrium.

The Bigger Picture

But to end on a cautionary note: Most economic models take a very limited view of how individuals behave and, in particular, what they value and how they perceive their situation. Courses you take in organizational behavior (in particular, courses employing social psychology as the chief discipline), present an important complementary perspective to the economic way of thinking.