Competition and Cooperation
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The language of business is frequently based on the language of competition, or even war. In fact, business has elements that are competitive, and other elements that are cooperative; elements that are zero-sum, and others that are positive-sum; elements focused on creating value, others focused on distributing value. Without the cooperative elements, the competitive ones wouldn’t be worth the effort.

This session is devoted to restoring the balance. We’ll look at situations in which firms are as much allies as adversaries and explore ways in which they might develop their common interests. Examples include:

- Microsoft and Windows. Since both depend on the health of the PC market, they have a clear common interest. Which is not to say that their interests are the same.

- Management and labor. Other things constant, a firm makes more money if its labor costs are lower. But disagreement between management and labor shrinks the pie and potentially leaves both worse off. Surely one of the reasons Southwest is more efficient than US Airways or United is that they do not have a history of labor-management strife.

- International trade. The logic of trade, which has been understood by specialists (if no one else) for almost two centuries, is that both countries benefit. Voluntary trade creates value that benefits both sides.

- Stern students. There’s a narrow sense in which one student’s success comes at the expense of another’s: not everyone can get the highest grade. But there’s a more important sense in which students have a common interest: you learn from each other, share insights and contacts, and the success of your fellow students increases the reputation value of a Stern degree.

Such combinations of cooperation and competition were dubbed “co-opetition” by Novell’s founder, Ray Noorda. The message is not that you should be nice in business (although courtesy remains a virtue, even in the 21st-century business world), but that you should understand (i) when you and others have similar interests and (ii) how to take advantage of them.

Common Interests
Some decisions concern the creation of value, others how to divide it up: making the pie and fighting over its pieces. Let’s start by stressing the “creating value” part of business relationships.

Consider the relation between a firm and its suppliers. On the one hand (the economist in us speaking!), a firm does better if it gets a low price on its inputs. On the other, the firm and supplier both benefit if the final product does well. Take two airlines, American and Delta. In one sense, they are in direct (and often quite cutthroat) competition for market share, landing slots, and gates. Yet these firms also complement each other. How? They both buy planes from Boeing. These planes are expensive for Boeing to design and produce. If only Delta purchased planes from Boeing, it might not be enough to allow Boeing to invest in improved design features. Moreover, aircraft manufacture benefits from a step learning curve: the more Boeing produces, the cheaper they can sell them. So if American buys more, there’s a clear indirect benefit to Delta.

There’s a similar logic for a firm and its employees. Suppose you are the representative of a labor union, and I am an executive of a corporation. We are engaged in negotiations over the next contract. We realize we don’t have identical interests. I think that you want an unreasonable wage hike and excessive vacation time; you think I am an indifferent manager who wants to deny you any added benefits or share in the firm’s success. I think any gain you receive will be at my expense. You think that any denial of your demands results in a win for me. This is a distributive, zero-sum mindset where we each think there is no way to win without the other side losing.

But picture a somewhat different scenario. Suppose I (the executive) believe that profits will be way up in the next five years thanks to efficiency gains in the firm’s productive capital, and thus its labor. As a result, I am willing to give quite a bit on wages to reflect these productivity gains. Nevertheless, I am adamant in opposing any additional vacation benefits, which raise cost without increasing productivity. Similarly, suppose you (the labor rep) are flexible over vacation time, but adamant about wage increases. Suddenly, there’s a clear win-win possibility. You and the manager can cooperate on those issues on which you agree.

A more subtle example brings us back to the Bertrand trap of price-cutting: if we are direct competitors, can we avoid the destructive temptation to undercut each other’s prices? Clearly we would both gain if we understood that cooperation on price benefits each of us. In this case, there’s a legal issue, too, since getting together to fix the price violates antitrust law in the US and many other countries. But if we simply understand our common interest, perhaps we could approach the same outcome without explicit agreement.

**Cooperation as a Nash Equilibrium**

Let’s continue with the price-cutting game we studied earlier. How might firms learn to avoid behavior that is mutually destructive?
One answer – the one we’ll spend our time on – is that when firms interact repeatedly over time, they might be able to avoid the short-run temptation to cut prices or otherwise act in their narrow self-interest. If two firms compete not only today, but tomorrow and the next day and so on, this gives each of them leverage over the other. If one cuts prices too low today, the other can instigate a price war to punish it tomorrow.

Take OPEC as an example to see how this might work. Oil-exporting countries meet periodically to restrict output, setting output quotas for each country. Say in country X the quota is 100,000 barrels per day. What if the country actually produced 120,000 to generate additional revenue? After all, no judicial body enforces the cartel agreement. If others stick to the agreement, this will keep the price high and increase the benefits of producing more. In the language of game theory, country X has an incentive to “cheat” on its agreement with OPEC to limit supply. If others cheat (after all, they have the same incentives), output increases and the price falls, foiling the cartel’s efforts.

So what stabilizes a cartel? In fact, they tend not to be that stable. But when they work, there are other sources of leverage at stake. One is that OPEC members play this game over and over. If a country cheats in one round, then the cartel can retaliate against in the future by cutting its quota or flooding the market with oil to drive prices down (Saudi Arabia is in a good position to do this). Ie, it could launch a price war. There’s a further difficulty with OPEC, which is that members may not know exactly what the others are producing. We’ll return to this later.

The general point is this: when firms interact repeatedly, the possibility of “retaliation” or “punishment” for non-cooperation can support cooperation as a Nash equilibrium. One example is the price-cutting: it may be less attractive to undercut your rival if such behavior triggers a price war.

Related issues:

- Distressed firms. If a firm is worried that it may not survive to tomorrow, future punishment no longer works as a deterrent. Thus we frequently see distressed firms starting price wars. This has been a particular problem with airlines, many of which have been in and out of bankruptcy throughout the 1990s.

- Multi-market contact. Some firms compete in more than one market. This gives them each more leverage over the other. If they behave uncooperatively in one market, you can “punish” them in another. A good example is airlines. A study showed that when airlines compete on multiple routes, they are less likely to compete aggressively on price. The media industry is filled with examples of multi-market contact, which presumably gives them leverage over each other.

- Information. Generally it’s harder to punish non-cooperative behavior if you don’t observe it. This is one reason antitrust authorities worry about transparency: it
allows firms to cooperate more effectively. It’s been a major source of debate on B2B e-commerce, since it puts a great deal of information into one or more competitor’s hands, which might be used to enforce cooperation.

More Examples

- **Sony and Electronic Arts.** Sony needs good games to sell its Playstation machines, and EA needs machines to sell its games. Nintendo recognized the common interest and has produced both from the start.

- **Intel and AMD.** Right now, Intel is the standard for PC chips. But it wasn’t that long ago that Intel was trying to carve out a niche for itself. Its major customer in the early 1980s was IBM and its fledgling PC, and IBM was concerned about sourcing from a single supplier. (Apparently the same logic didn’t apply to the operating system.) To convince IBM to buy their product, they licensed the technology to IBM, AMD, and several other manufacturers. In this case, Intel realized it had a common interest with AMD and others to persuade IBM that the supply of chips was competitive, so it supported them through licensing. Once Intel had a lock on the market, of course, the common interest evaporated.

- **GE and Westinghouse in the 1950s and 60s.** A classic case, first, of price-fixing, and later of clever cooperation that was ultimately judged to be illegal (but still clever!).

- **National Basketball Association.** There are at least two layers of common interest here. First, the league needs credible competition to succeed. It’s simply not optimal (most believe) for a small number of big-market teams to win all the time. Among other things, the primary source of revenue is television fees, which are paid to the league, not to individual franchises. Second, owners and players have a common interest in the success of the league. How do we align all these interests? It’s a complex situation, but the salary cap is an attempt to both even the playing field across teams and guarantee that owners and players share in the overall success of the league (they are guaranteed a minimum percentage of revenues). Anyone who follows the sport knows this is grossly simplified, but the fact remains: it’s critical in a sport to balance the interests of teams, the league, and the players.

Legal Issues

Some kinds of cooperation are illegal (price-fixing, for example), others are legal (for example, most industry standards groups), and others lie somewhere in between. Consult the “Antitrust Guide” for more information.

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