This time I write about two books by economists. The first looks at the economics and winning business strategies of industries that require software platforms. The second addresses globalization.


The authors are experts who consult regularly with leading platform-based businesses. Evans and Schmalensee have advised Microsoft for many years, particularly about Microsoft’s antitrust difficulties. Hagiu wrote a doctoral dissertation on two-sided economies—situations in which two groups must participate (for example, auctions, which need both buyers and sellers).

In this book, the authors lay out the underlying principles and parallels of personal computers, mobile phones, video games, online auctions, search engines, and similar industries. All of these have in common that they have more than one “side.” For example, the Microsoft Windows operating system creates an ecosystem of hardware manufacturers, application developers, and end users.

The various sides in the ecosystem that a software platform creates depend on each other in various ways. Hardware manufacturers need software support to maximize their performance/price ratios. Hardware manufacturers and developers need buyers for their products, while the existence of desirable products on a platform leads to more buyers. These are the well-known network effects that cause some platform ecosystems to grow rapidly while others shrink and die.

The interdependence of the sides in a platform-based ecosystem is commonplace knowledge. This book, however, goes into the details. It provides brief histories of various platforms and shows how their business and pricing strategies evolved.

The authors find that in each platform ecosystem, one side gets a better deal than the others. For example, in the Windows ecosystem, developers receive valuable tools and support for minimal cost, while buyers of Windows-based computers and software provide most of Microsoft’s profits. In the video game business, on the other hand, users receive the game platforms at highly favorable prices, and the platform makers receive most of their profit from game developers. Media players (for example, Real Player or Apple QuickTime) are always free to end users, while the developers of the player software obtain their profits from content developers and distributors.

The book delves into pricing issues such as price discrimination, bundling, and charging for access versus charging for usage. The authors find, sadly, that it almost always pays the manufacturer to bundle features, even though most buyers won’t use most of what they buy. This leads to a kind of Moore’s Law of software bloat: Software platforms double in size roughly every two years.

The access versus usage question arises most notably in communication platforms such as phones or personal digital assistants (PDAs). In theory, platform providers should charge for both, but in practice they usually charge for just one. Interestingly, an industry rarely changes its pricing strategy as it matures. It tends to stick with the model that made it successful. An industry does, however, change its integration strategy. New platforms usually provide all sides of the ecosystem, because the network effects have not yet occurred. Later, as the ecosystem grows, the provider defines application programming interfaces (APIs) to allow outside vendors to supply alternatives to the platform provider’s offerings. Microsoft Windows, for example, defines many standards to allow computer and peripheral makers, application developers, and even browser makers to complement each other’s offerings. The Apple media delivery system, on the other hand, works best when all of the components (iTunes, iPod, the Apple music store, and the associated digital music store) work together.
rights management software) come from Apple. Apple buys and resells content for this system.

As the authors discuss one platform after another, they repeatedly stress the importance of APIs and other standards that allow different sides of the platform ecosystem to innovate without entanglement with other players. We all know this, but it is interesting and useful to see the principle at work in many different platform ecologies.

The best thing about this book is the concrete detail. Although the authors work hard to show the similarities between different platform-based businesses, their theories are not a pro-crustean bed. They discuss the quirks and odd corners of each industry and show how those quirks lead to the unique business strategies of that industry.

This is a valuable book for anyone who wants to understand or engage in a business based on a software platform. I recommend it highly.


In The World Is Flat (Farrar, Straus and Giroux, 2005; Micro Review, May/June 2005), New York Times columnist Tom Friedman emphasized the bright side of globalization. In Globalization and Its Discontents (Norton, 2002), Nobel Prize winning economist Joseph Stiglitz addressed the dark side of globalization. In his latest work, Stiglitz fuses these threads. He proposes ways to correct the problems he described in his earlier work, so everyone can benefit from globalization.

Joseph Stiglitz shared the 2001 Nobel Prize in Economic Sciences for his analysis of markets with asymmetric information. His research disproved many cherished assumptions that had persisted from the time of Adam Smith to the late twentieth century. In 1776, Adam Smith argued that free markets lead to efficient outcomes as if by an invisible hand. Starting with his field work in Kenya in 1969, Stiglitz accumulated the insights that led him finally to the conclusion that the invisible hand, if it ever existed, had disappeared.

In its place, Stiglitz argues, government has a role in keeping free markets working. For example, free markets naturally lead to rapid flows of speculative capital into and out of developing countries. Institutions and regulations must protect those countries from the resulting instability.

By the time he received his Nobel Prize, Stiglitz had put his ideas into practice. He served as chair of President Clinton’s Council of Economic Advisors, then as Chief Economist of the World Bank. While at the World Bank, Stiglitz went to war against the policies of the International Monetary Fund (IMF) and its chief supporter and shareholder, the United States Treasury Department.

Stiglitz’s 2002 book Globalization and Its Discontents contends that IMF policies favored United States financial interests, while short-changing the poor nations that the IMF is supposed to help. That book was widely influential, especially after huge protests against globalization like that at the World Trade Organization meeting in Seattle, in November 1999. The book identified many problems and suggested some changes, but it didn’t offer a comprehensive solution. Four years later, Stiglitz continues the story of the adverse effects of globalization, but also offers solutions to many of the problems he sees.

Stiglitz summarizes the main complaints against the current implementation of globalzation:

- The rules favor the industrialized countries. The rules are so unfair that they make the poorest countries worse off.
- Material values are more important than the environment or even life itself.
- Democracy suffers when developing countries lose sovereignty over decisions that affect their citizens’ welfare.
- There are many losers in both developed and developing countries.
- Developing countries must accept Americanization of their economies and their culture.

An issue that exemplifies several of these points is especially relevant to technology-based industries. The protection of intellectual property ensures that those who invest their time and money in writing books or developing inventions receive a reward for their efforts. Granting a time-limited monopoly to creators encourages innovation and helps to expand the body of knowledge.

In recent years, however, United States laws about intellectual property have become a drag on innovation in the software industry. There are far too many software patents, and most of them are unwarranted. In any event, nobody can keep track of them all. Stiglitz quotes Tim Berners-Lee on this point: “Developers are stalling their efforts in a given direction when they hear rumors that some company may have a patent that may involve the technology.”

In the drug industry, patent laws favor the development of minor variations of high-volume drugs rather than cures for “orphan” illnesses with low potential sales. They also keep life-saving drugs out of the hands of people who need them but can’t afford to pay.

In 1993, bypassing the existing World Intellectual Property Organization, the World Trade Organization adopted the TRIPs agreement (for “trade-related” intellectual property). This subjected developing countries to even more onerous intellectual property restrictions. The most well-known example is the fight over the right of countries with high incidences of HIV-AIDS to manufacture generic versions of expensive drugs for that disease.

More humorous examples are attempts to enforce western patents on
traditional Chinese medicine or on the medicinal use of turmeric in India.

I never advocate any particular political point of view in this column. Globalization, however, is inherently political. In laying out his program to address the problems of globalization, Stiglitz makes many statements that others might regard as politically biased. Nonetheless, Stiglitz presents a compelling, comprehensive case for his program. Like Thomas Jefferson, he believes that an informed electorate that is willing to hold its leaders accountable can solve problems like those of globalization. He hopes to help today’s voters and leaders understand the issues that globalization has raised.

I won’t go further into Stiglitz’s views here. I recommend that you read his book for the details of his analysis and his solutions.

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