

Managing the Maze of Multisided Markets

Running a platform business? Take a tip from Hiromoto Fukuda's dating club.

by David S. Evans

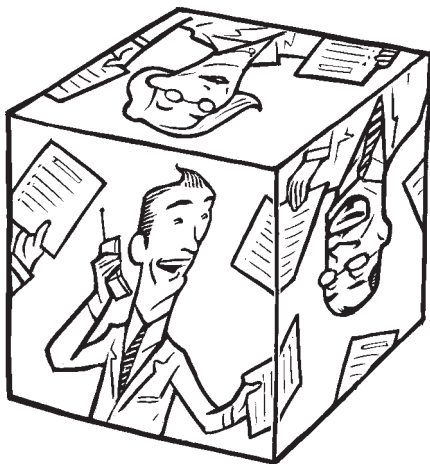
Hiromoto Fukuda started a new kind of dating club in Osaka a few years ago. At the Tu-Ba Café, men and women sit on opposite sides of a glass divide. A man who sees a woman he wishes to meet can ask a waiter to carry a “love note” to her. Mr. Fukuda knew he needed to get his pricing right to ensure there would be enough men for the women, and women for the men. So the Tu-Ba Café charges men \$100 for membership plus \$20 a visit — and lets women in free.

Frank McNamara started a different kind of club in 1950: He invented the credit card. A “member” of the Diners Club could charge meals at restaurants and pay the card company at the end of the month. Like Hiromoto Fukuda, Mr. McNamara recognized that it takes two to tango. Without enough cardholders, merchants wouldn't participate, and without enough merchants on board, customers wouldn't bother to obtain a card. Merchants were equivalent to the men in the dating club, and the cardholders were like the women, so

Mr. McNamara loaded the charges on the merchants. American Express Company adopted this pricing model a few years later, and made a fortune.

New York City mayor and business information entrepreneur Michael Bloomberg didn't call the Bloomberg Professional Service a club when it was launched in 1982, but the global data and news powerhouse that this club became rests on insights parallel to those of Hiromoto Fukuda and Frank McNamara. Like other information services, Bloomberg L.P. provides proprietary financial data via an electronic network. Unlike others, however, Bloomberg recognized early on that the system would be most valuable if it linked customers to a vast array of third parties offering services ranging from securities trading to electronic “road shows.” Users pay a monthly fee (\$1,300 per terminal for multiple terminals). But to attract the ocean of content that makes the service so popular with financial-services professionals, Bloomberg often doesn't charge independent content providers much for access to the platform.

Multisided markets (markets



that link two or more distinct but interdependent groups of customers) have been around for decades, but they're proliferating rapidly today as modern information technology creates more opportunities for organizing complex markets. (See Exhibit 1.) Although the "platforms" that businesses create to serve multisided markets differ widely in technology and organizing institutions, all share three features:

- Each platform serves two or more distinct groups of customers. Examples: men and women, merchants and cardholders, financial-services users and financial-services sellers.
- The value of the platform to each group of customers increases along with the number of customers in the other interdependent groups. Credit card holders want every store near them to accept their plastic; the more customers carrying the card, the more stores value it.
- The platform must provide a superior way for the customer groups to interact. Financial-services professionals have plenty of alterna-

tives for gathering information, but Bloomberg offers one-stop shopping for almost every conceivable source of financial data.

The fact that circumstances make it possible for a platform to exist does not mean that it will. Moreover, even if a platform is built, potential customers may find other ways to obtain the services. IBM maintained an operating system for its mainframe computers, but expended less effort to make it a ubiquitous platform than the Microsoft Corporation did with Windows. And although you can find your true love on Yahoo Personals, you still might prefer chatting up strangers on a Sunday walk in the Boston Public Garden.

The economics underlying these multisided platforms are only just now being plumbed, with a couple of French academics, Jean-Charles Rochet and Jean Tirole, in the forefront. We already know enough, however, to recognize that you'll poke yourself in the eye if you apply the rules of thumb about traditional markets learned by every MBA candidate in the land. As the

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Exhibit 1: A Sampling of Multisided Markets

	Customers	Who Pays
Network Television	viewers, advertisers	advertisers
Payment Cards	cardholders, merchants	in large part, merchants
Yellow Pages	phone shoppers, merchants	merchants
Computer Operating Systems	hardware makers, software applications developers, computer users	computer users
Video Game Consoles	players, game makers	both sides
Web Auctions	buyers, sellers	sellers

dating club example plainly shows, equating incremental costs to incremental revenues for each class of consumers doesn't work. Nor, for that matter, will pricing low to build market share and lock in customers — a lesson learned the hard way by dozens of dot-coms operating in multisided markets.

Both Sides on Board

Frank McNamara faced the classic chicken-and-egg problem that keeps every platform wannabe up at night. Diners Club needed cardholders to get merchants to sign up. Meanwhile, consumers were reluctant to carry the card unless a lot of merchants accepted it. Mr. McNamara and his partners started small, giving the card away to a few hundred residents of Manhattan (hoping they were hungry). Sometimes cards were simply stuck under apartment doors. Then they went from restaurant to restaurant, asking for 7 percent of the check if people paid with the card. Initially, just 14 eateries signed up.

But mighty oaks from little acorns do sometimes grow: By its first anniversary in 1951, Diners Club had about 300 merchants and 40,000 cardholders in the fold. Little more than a decade later, Diners Club could boast 1.5 million cardholders and 150,000 establishments accepting their plastic. Mr. McNamara may not have become the Bill Gates of credit cards, but he accomplished something that would have made investors in many a high-tech startup envious: Diners Club was profitable from its first year. Starting small in platform markets and scaling up sometimes has advantages.

When American Express decided to break into the business in 1958, it didn't have the luxury of

ramping up slowly. So it built both sides of the platform by piecing together some small existing card programs, such as one operated by *Gourmet* magazine. American Express subsequently followed a “marquee” strategy for getting both sides engaged, that is, sign up highly valued customers on each side to attract more on the other. From the merchant's perspective, marquee customers included free-spending business travelers not inclined to comparison shop. From the cardholder's perspective, it meant high-end stores whose presence in the network conferred status on the big spender.

Malls, which are the sort of platforms that make it cheaper and easier to bring together stores and shoppers, often follow a marquee strategy, too. They lure “anchors,” for example, a department store with cachet such as Saks Fifth Avenue or Nordstrom, to attract other stores, as well as a critical mass of shoppers.

Attracting complementary participants to a multisided market and keeping them there requires the right pricing structure as well as the right price levels. Pity the managers of the B2B e-commerce pioneers who thought all they had to do was turn on the switch and watch their Web sites hum with transactions. Or the mobile phone network operators, who invested tens of billions of dollars in spectrum for enhanced services such as streaming video without making sure that they could provide the right price incentives to get both content providers *and* subscribers on board.

To see how complex and unintuitive optimal pricing in a platform business can be, imagine creating a mobile phone platform that

you hope to scale up by offering third-generation (3G) broadband content to subscribers. Should you price low to lure phone subscribers and rely more on the revenue from charging the content providers for access to your millions of customers? Should you charge the subscribers and give the content providers an easy ride? Or should you do something in between?

Traditional market research, which predicts prospective customers' reaction to varying price points, won't help much because demand by multiple groups of platform customers is interdependent. You thus have to figure out how much each side values the other, then calculate the prices that will make sure that both sides show up in the right numbers — and, of course, make sure the revenues will still be adequate to generate a profit.

Although pricing is important, it is only one element in the design and implementation of a platform strategy. Apple Computer Inc., for example, lost its commanding lead in user-friendly computer operating systems because it picked the wrong platform model. The company sold its computers and its operating system as a package, making the platform available to software developers and computer users. Bill Gates was one of those developers. Indeed, Microsoft was the largest supplier of applications software for Apple computers in the mid-1980s. Long before the company focused its attention on building the Windows platform, Mr. Gates realized that he could sell more Apple applications if Apple sold more operating systems. Hence, he wrote Steve Jobs a now-famous letter, in effect advising him to move from a two-sided to a three-sided platform model by

licensing the operating system to independent vendors eager to make Macintosh clones.

The founders of Palm Inc. were quicker to recognize the virtues of a multisided platform. They started with an integrated product, a handheld device with a terrific small operating system and a killer handwriting recognition application. But they responded to the evolving business environment by turning this traditional one-sided business into a two-sided platform business by encouraging independent software developers to write applications for

than time spent on the network.

The success of multisided platform businesses ranging from American Express to Palm to NTT DoCoMo has led some traditional one-sided businesses to restructure as platforms. Take voice mail. Several firms developed software that telecoms use to operate voice-mail systems in which the only customers are subscribers. Unisys, one of the largest messaging vendors, with 110 million voice-mail boxes worldwide, is extending this old technology to a four-sided platform. The company is developing platforms that connect

quickly. Network effects, in which the value of the services for individual users rises with the total number of users, would then theoretically serve as a potent barrier to entry for competitors.

The idea looked good in the business plans that made the rounds of the venture capitalists. But it has hardly ever fit the realities of platform industries. Diners Club was first in payment cards, and it developed a huge network. Yet that didn't stop American Express from toppling it. The first general Web auction site wasn't eBay Inc. — it's just the only one anyone remembers. Nor, for that matter, did Palm sell the first PDA.

Experimenting on a small scale and then expanding can help platform businesses avoid catastrophic losses. The mighty eBay started as an auction site for people who wanted to buy and sell Pez candy dispensers. It got the pricing model right (sellers pay, buyers don't) and worked the kinks out of the platform design before rushing to fill the market. Over time it has expanded to other C2C products, to B2C, and ultimately to B2B. Yet where scale mattered, eBay managed to get there quickly. For example, it used its brand recognition and national market reach to become a powerhouse in used-car sales in a matter of months.

Arguably the biggest mistakes in scaling multisided platforms have been made by the mobile phone industry. The industry collectively spent \$115 billion on technology and spectrum to facilitate 3G high-speed service for cell phones. However, it failed to understand that the content to make customers willing to pay premiums for 3G service wasn't yet available.

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the Palm. The company transformed this two-sided platform into a three-sided platform in 1997, when it started licensing the Palm OS to other makers of handhelds. Today 13 companies (plus Palm) sell "Palm-powered" devices.

NTT DoCoMo Inc., the giant Japanese mobile phone service provider spun off from NTT, runs a successful three-sided platform. Its phones enable users to access a variety of nonvoice services, ranging from interactive Sony PlayStation games to purchases from vending machines. Content providers get access to the network free of charge, paying NTT DoCoMo only a percentage of the fees charged to users of their premium services. The company generates most of its revenues from subscriber fees, which are billed according to the amount of information downloaded rather

content providers, subscribers, application developers, and telecommunications distributors.

Experiment and Evolve

There's no substitute for experience in solving the chicken-and-egg problem, or in setting prices to balance demand. So late entrants can often learn a lot from pioneers. Moreover, just because a variant of a platform strategy has worked well doesn't imply that some clever follower can't do it better. American Express didn't start making money until it experimented with higher cardholder fees and lower merchant fees than its competitors were charging.

Or consider the role of first-mover advantages. During the dot-com boom, everyone seemed to agree on this formula for success: Price low to build market share

Not every mobile phone company has been badly damaged by failing to get the 3G platform right the first time around. NTT DoCoMo, which succeeded so dramatically in selling the relatively limited services available through the previous generation of mobile phone networks, has finessed the 3G content problem by expanding very cautiously into the new technology. By contrast, U.K.-based Vodafone Group PLC, the largest mobile communications supplier in the world, spent \$20 billion for the spectrum needed for 3G services in the U.K. alone. Among other issues cited, Vodafone's deal with Vivendi Universal SA to provide content apparently discouraged participation by competing content providers.

Business strategies would be relatively simple to design if platform businesses just had to worry about frontal assaults — the shopping mall across the street, the Microsoft Xbox challenge to the Sony PlayStation, Yellow Pages USA going head-to-head with the telecom company SBC Communications Inc. in some U.S. regional markets. In these cases, at least, firms are fighting on the same battlefield.

But sometimes platforms intersect in complex ways. One platform may connect customer groups A and B, while another links customer groups B and C. So the managers of the respective platforms must set prices and services with an eye on how the other platform treats customer B.

Free over-the-air television faced this problem with cable television. Free TV had succeeded by delivering relatively inexpensive-to-produce content to viewers and paying the bills with revenues from

advertising. Cable television, by contrast, made most of its money from access charges, giving it the option to offer viewers less advertising as well as premium content. AOL Time Warner Inc., which delivers relatively rich content along with Internet access, is now facing a similar problem in competing with plain-vanilla Internet service providers.

Note, too, that price competition between platforms can be fierce when customers on one side have

entry may yield first-mover advantages, or merely simplify the search for successful strategies by those that follow. Consider, too, that customer group interdependence makes it far more difficult to anticipate the impact of changes in the business environment.

Still, along with greater challenges go greater rewards to the nimble and the better capitalized. Many of the great business empires of the modern era — think eBay, American Express, Microsoft, Cisco

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practical alternatives for obtaining services. The *Milwaukee Journal Sentinel* dominates the newspaper market in the city. That doesn't mean it can exercise much pricing power, though: Advertisers in Milwaukee have many other ways to gain the attention of potential customers.

Tomorrow the World

Markets hardly ever cooperate by following simple rules derived from economic theory. In traditional markets, however, economic truisms can at least serve as benchmarks and starting points for more nuanced analysis. By contrast, multisided platforms, especially those in new markets, too often require clean-sheet planning from strategists. With multiple, yet interdependent, customer groups to serve, companies find that direct costs provide little guidance for pricing strategies. By the same token, early

— have prospered precisely because they have excelled at making multisided platforms work to their advantage. Today dating clubs, tomorrow the world. +

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