

**Striking Up The Band: A Review of *Bandwagon Effects in High-Technology Industries*  
(Jeffrey H. Rohlfs, MIT Press, Cambridge, MA, 2001)**

**Gerard Donald**

Operations and Management Science Department  
Carlson School of Management  
University of Minnesota  
[gdonald@csom.umn.edu](mailto:gdonald@csom.umn.edu)

---

*Bandwagon Effects in High Technology Industries* by Jeffrey H. Rohlfs (MIT Press, Cambridge, MA, 2001) is a well-written treatise on the impact of momentum in the technology marketplace. Although the book is not written with electronic commerce as its theme, the principles presented are very applicable in e-commerce markets. Mr. Rohlfs develops his book through two perspectives: using a brief, straightforward explanation of bandwagon economics and through a series of relevant case studies. In recognition of the duality of the potential reading audience, the author structures the book such that the reader can skip the economic explanations, read the case studies and still gain a strong understanding of the impact of bandwagon effects.

The author defines the bandwagon effect as:

*“A benefit that a person enjoys as a result of others doing the same thing that he or she does. In particular, a consumer may enjoy bandwagon benefits as others consume the same product or service that he or she does.”*

This definition builds upon the notion of network externalities: a concept that denotes that the value of the good grows as the number of units of the good sold increases (Economides, 1996).

In eight case studies, Rohlfs uses four recurring concepts to help define the development of bandwagon effects for a product or technology: solving the start-up problem, interlinking, setting technical standards, and developing complementary bandwagon effects. Table 1 summarizes these concepts. (See Table 1.)

### **Solving the Start-up Problem**

Solving the start-up problem is critical for creating a marketplace environment suitable for the growth of bandwagon effects. To solve the start-up problem, a company must establish a critical mass of users to establish value for all users. To create a critical mass, the author suggests that the firm price a service, such as Internet access, as a multipart tariff scheme. This pricing scheme includes a low fixed cost and usage-based variable charge. Although the low fixed charges would not cover the firm's investment, the pricing scheme subsidizes the rapid development of a critical mass of users. Once a critical mass is established, the bandwagon effect begins, allowing the company to recoup its short-term losses through the collection of greater usage charges by current users and the willingness of new users to pay higher prices.

An economic representation is shown in Figure 1. (See Figure 1.) On the upward slope or left side of the graph, the bandwagon gathers momentum. As higher quantities of a particular product are purchased, there is a corresponding increase in price, reflecting the higher willingness-to-pay that additional consumers place on joining the bandwagon. This differs from the non-bandwagon markets that display a demand curve that mimics the right side or downward sloping portion of the graph.

Extending the author's line of thinking to e-commerce, solving the start-up problem could involve "seeding" the market with low cost Internet access terminals or mobile devices that would allow key customers to access the electronic market. For instance, an on-line brokerage could provide mobile phones to key customers for the express purpose of trading financial instruments. The cost of the phones could be recovered in the form of increased brokerage fees as these customers traded more frequently. An added bandwagon effect would be the enticement of others to join the trading.

### **Interlinking**

Interlinking is a double-edged sword for establishing bandwagon effects. As described by the author, interlinking is the ability of customers of multiple suppliers to create bandwagon effects. For example, through their demand for email, customers of several competing Internet Service Providers (ISP) create bandwagon effects for the entire ISP industry. However, if the management of one of the ISP's, like America Online, feels that its business model offers significant advantages that generate bandwagon effects relative to other ISP's, the management team may not view interlinking as beneficial.

### **Setting Technical Standards**

As the lack of a common language prevented the building of the Tower of Babel, the lack of technical standards hampers the expansion of bandwagon effects. Whether developed by government intervention or industry consensus, technical standards promote the interlinking of products and services of multiple suppliers while reducing the economic waste incurred in the development of competing standards. Dai and Kauffman (2002) note that in business-to-business trading networks, one of the factors that extends the acceptance of these networks is the use of Extensible Markup Language (XML) as the standard for creating and exchanging business documents. In contrast, mobile commerce deployment has been hindered by the lack of uniform payment standards. PayCircle, a consortium of companies

that includes Hewlett-Packard and Oracle, aims to define the necessary standards framework to advance mobile commerce.

### **Developing Complementary Bandwagon Effects**

Complementary bandwagon effects are derived from the availability of products or services that are necessary for the function or enhanced utilization of the base product. For instance, online vendors create complementary bandwagon effects for Internet portals such as America Online or Yahoo, the base products. By providing the added appeal of shopping to these informational portals, the online vendors attract additional subscribers to America Online and Yahoo. Furthermore, these effects are multiplied by attracting even more online vendors.

Business-to-business electronic markets also create similar effects. The long-term viability of B2B websites such as Covisint (automobiles) and Diary.com (foods) is dependent upon the complementary bandwagon effects of vendors and customers exchanging goods through these portals (Dai and Kauffman, 2002).

Bundling, the aggregation of products or services into a single purchasable unit, can be looked as a special kind of complementary product. Bakos and Brynjolfsson (2000) find that a bundler of Internet information products can displace a market incumbent that offers only an unbundled product or service. Once this bundler takes the market leadership position, it gains the benefits of bandwagon effects. Other firms will find it less attractive to create new products for this market, driving potential customers to the new market leader. This concept is relevant in e-commerce applications such as electronic banking and financial software products.

## **Conclusion**

Rohlf's is successful in his description of the building blocks of bandwagon effects, especially for business managers who face the challenge of starting a bandwagon for new tangible products. Through case studies of products such as the personal computer, the television and the facsimile machine, the author depicts the strengths and shortcomings of the business strategies executed by companies and industries in their attempt to generate bandwagon effects.

However, given the general technology focus of the book, the author fails to adequately address the unique concerns of establishing and maintaining the benefits of bandwagon effects in electronic commerce. For instance, in the case study of personal computers, Rohlf's identifies several key issues for the success of Microsoft and Intel in this industry. First, these two companies are able to maintain their market positions through a large user set, where each user benefits from the bandwagon effects of having others who utilize computers configured with Intel processors and Microsoft operating systems. Second, these two companies were able to take advantage of the market misjudgments of others in the start-up phase. Once these two companies established the "standard" for PC's, other companies were left to the less profitable areas of the personal computer market, such as manufacturing and distribution.

Like Microsoft and Intel, electronic commerce companies such as eBay, E\*Trade and Amazon.com have established considerable market presence in their respective market niches. Similarly, these e-commerce firms have been able to take advantage of the skepticism exhibited by traditional players in their respective markets. However, unlike Microsoft and Intel, these enterprises face hurdles in their building of bandwagon effects. Chircu and Kauffman (2000) identify three challenges to electronic commerce businesses:

imitation and weak appropriability; ownership of co-specialized assets; and economies of scale.

Although eBay, E\*Trade and Amazon.com have established sizable customer bases, each business faces challenges due to imitation and weak appropriability. Imitation and weak appropriability reflect the relatively low barrier to market entry by traditional industry players or new players such as technology suppliers. For example, a traditional industry player, such as Barnes and Noble can co-opt the customer base of Amazon.com, or a new player, such as Dell Computer, can challenge eBay (Auerbach, 1999).

Similarly, the lack of ownership of co-specialized assets reduces the chance for sustaining bandwagon effects in present markets. The co-specialized assets of Merrill-Lynch, well-trained brokers, can attract the established customer base of E\*Trade, by providing extra value to investing clients.

Finally, although electronic commerce firms can be the first-mover in many markets, these businesses face challenges in developing an adequate customer base to reach the appropriate economies of scale. Without these economies of scale, investment returns will be reduced, lessening the incentives of the firms to innovate. Without innovations that become widely recognized in the market, the attractiveness of the products or services offered by these e-commerce firms will diminish, leaving their markets niches open to competitive bandwagon effects.

## References List

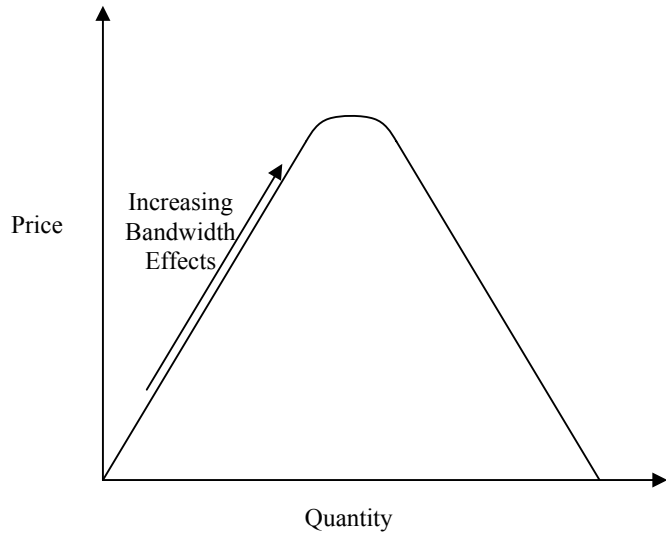
- Auerbach, J. G. (1991) 'Internet Giants Pool Their Bids For Auction Site To Rival eBay', *The Wall Street Journal*, 17 September.
- Bakos, Y., and Brynjolfsson, E. (2000) 'Bundling and Competition on the Internet', *Marketing Science*, 19(1), Winter, pp. 63-82.
- Chircu, A. M. and Kauffman, Robert J. (2000) 'Reintermediation Strategies in Business-to-Business Electronic Commerce', *International Journal of Electronic Commerce*, 4(4), Summer, pp. 7-42.
- Dai, Qizhi, and Kauffman, R. J. (2002) 'Business Models for Internet-based B2B Electronic Markets: An Exploratory Assessment', *International Journal of Electronic Commerce*, 6(3), Spring, in press.
- Economides, N. (1996) 'The Economics of Networks', *International Journal of Industrial Organization* 14(6), October, pp. 673-699.

**Table 1 – Bandwagon-Based Business Approaches in E-Commerce**

<b><i>Key Characteristics</i></b>	<b><i>Business Approaches</i></b>	<b><i>Illustrative Examples</i></b>
<b><i>Solving the Start-up Problem</i></b>	<b><i>Subsidizing a small group of pioneer users of a new product or service.</i></b>	<b><i>Giving free cell phones to a select group of brokerage customers to encourage mobile trading.</i></b>
<b><i>Interlinking</i></b>	<b><i>Promoting compatibility with competitive products to build the overall market.</i></b>	<b><i>Allowing multiple on-line real estate listing services to cross-reference properties on competing services.</i></b>
<b><i>Setting Technical Standards</i></b>	<b><i>Working with competitors and governmental institutions to develop transactional standards.</i></b>	<b><i>Establishing industry wide standards for how financial payments will be transmitted via the Internet.</i></b>
<b><i>Developing Complementary Bandwagon Effects</i></b>	<b><i>Supporting the production of associated products or services.</i></b>	<b><i>Encouraging educational institutions to list offerings on an electronic learning portal.</i></b>



**Figure 1 - The Pricing of Bandwagon Effects**



**Note:** As bandwagon effects grow, the demand curve slopes upward. This upward slope represents the higher prices new users are willing to pay to join existing users.