Introduction

The article begins with descriptions of the three generations of competition in the U.S. video game console industry. After the descriptions of the three generations of competition, the author analyzed the reasons that caused a specific company to fail or success by looking into the strategies it took and suggested specific strategies both for the new entrant to successfully leapfrog the entrenched incumbent, and for the incumbents to defend its market position. Though the author took the U.S. video game industry for example, these concepts can be applied to many other industries demonstrating network externalities.

What’s new?

What I learned from reading this article are the strategies it provides for successful leapfrogging. The strategies as mentioned in the introduction can be divided into two, one is the strategies for the new entrant who wants to enter the market, and the other is the strategies for the entrenched incumbent to protect its market position from taken away. Before looking deep into the strategies for successful leapfrogging, there is one thing we should know, that is, the value to consumers of technologies characterized by network externality effects can be divided into at least three primary components: technological functionality, size of the install base, and availability of complementary goods. Therefore, the technological leapfrogging requires not only the technological advantage itself, but also requires the comprehensive consideration of value components. Then, I’ll try my best to give a description of the strategies for both the new entrant and the incumbent in brevity and clarity now.

Since the value to consumers of technologies characterized by network externality effects can be divided into three primary components, there are three things need to be done for new entrant to enter the market:

(1) Create a technological gap
New technologies must offer a functionality advantage over the existing standard, especially when the technology is incompatible with the existing installed base or complementary goods. Also, the new entrant must ensure that the advantages of its new technologies are well understood by customers.

(2) Build installed base and availability of complementary goods

There are several strategies can be applied below such as

1. Making the new technology compatible with the incumbent’s installed base and complementary goods

   Customers considering on adoption of a new technology will face switching costs of investment in their current system, investment in complementary goods and other peripherals, and also the time used to be familiar with the incumbent system. Thus, by making the new technology compatible with the existing standard and complementary goods, customers may transition to the new technology gradually.

2. Forming alliances with manufacturers of complementary goods and distributors

   Through alliances with manufacturers of complementary goods, the new entrant is able to negotiate joint promotion of the new technology with other goods.

3. Using attractive licensing and distribution policies to attract third-party developers and distributors.

4. Sponsoring production of complementary goods or producing them in-house

   If the new entrant is unable to secure production of complementary goods through alliances, it may produce complementary goods itself or sponsor their production in another firm.

5. Using aggressive discounting to promote rapid adoption by consumers

   Offering the product at a greatly discounted price or even free can increase the speed of deploy its product. Therefore, in network externality industries,
firms may initially offer products at or below cost in order to rapidly deploy the product, and recoup profits through later sales. In the video game industry this has proven to be a very important strategy.

6. Reducing resistance by offering guarantees to distributors and customers

   When there is uncertainty about whether a new technology will successfully become the incumbent standard, distributors, customers, and complementary goods producers face great risk in supporting the new technology. By offering full money-back guarantees to distributors and customers, the customers can recoup their switching costs if the technology not be successful.

(3) Shape perceptions and expectations through signaling

1. Advertising and vaporware to inflate “mindshare” and promote an impression that the installed base is or soon will be very large

   The sponsor of the new technology may be able to influence the perceived installed base and availability of complementary goods through advertising, and vaporware.

2. Leveraging the firm’s reputation for success in prior markets to the current market

   The firm’s reputation may create a signal about its likelihood of success.

3. Using credible commitments to signal the market that this is a battle the entrant intends to win

   Firms may use credible commitments such as major fixed capital investments and guarantees to convince their own stakeholders that the firm has what it takes to challenge the incumbents.

   There are also three things need to be done for the entrenched incumbent to protect its market position from taken away. Since the incumbent and new entrant are contraries, there are associations between the strategies they use. The first and the second things to be done by the incumbent are just the opposite of the new entrant.
Prevent a technological gap

An incumbent’s best defensive strategy, in turn, is to invest in continuous innovation in the standard, thus making it difficult for a potential entrant to create a technological gap. Let’s take a look at a real case in the video game industry. Despite Nintendo’s near monopoly position in the video game market throughout the 1980s, Sega was able to successfully enter the market in the fall of 1989 by offering its 16-bit system, at that time Nintendo had a 16-bit system in the works, so why can Sega take the market position of Nintendo? It’s because Nintendo did not invest in continuous innovation and intent on continuing to sell 8-bit systems, believing the systems had not yet maximized their potential. Nintendo thus helped create the opportunity for Sega to take its market position away.

Protecting installed base and availability of complementary goods advantages

There are several strategies can be applied below such as

1. Preventing compatibility of the existing platform and complementary goods with the offerings of a new entrant

   Most competitors in the U.S. video game industry have been fairly successful at this strategy. Nintendo, for example, uses a security chip to ensure that only licensed Nintendo games can be played in their consoles, and only Nintendo consoles can be used to play Nintendo games.

2. Making each generation of the incumbent’s platform backward compatible

   In this way, installed base and complementary goods advantages from previous generations are leveraged into the net generation. A particularly powerful defensive strategy for the incumbent is to combine continuous innovation with backward compatibility. Microsoft has utilized this strategy deftly with Windows through regularly updating and provides backward compatibility with major software applications developed in previous generations. Thus customers can upgrade without having to replace their entire libraries of software applications.

3. Using attractive licensing and distribution policies to ensure that its complementary goods providers and distributors are not lured away by the new
entrant.

4. Increasing the switching costs of customers

By encouraging customers to upgrade to new platforms, and through providing peripherals that lock the customers in the incumbent technology.

(3) Shape perceptions and expectations through signaling

Since perceived installed base and expected installed base can lead to a large actual installed base, the incumbent should invest heavily advertising not only on its actual installed base and complementary goods advantage, but also build the perceived or expected installed base in the incumbent’s technology.

Why is it important? So what?

It is important because one of the most important aspects of many high-tech industries is the presence of network externalities. And the article provides the strategies for new entrant to successfully leapfrog the entrenched incumbent and for the incumbents to defend its market position in the video game industry and these concepts can be applied to many other industries demonstrating network externalities. Thus, the article provides the industries characterized by strong network externality effects with a strategic guidance to use on their business.

Associations with the contents of the textbook

After reading the article, I found that there are strong associations with the contents of the textbook. In the Figure 1-1 of chapter 1, we can see the common characteristics that all high-technology industries share, which are market uncertainty, technological uncertainty, and competitive volatility in the video game industry case. The network externalities and the importance of industry standards and the strategies to use for setting an industry standard were also discussed. The continuum of innovations, which talks about the incremental innovation and radical/breakthrough innovations and the suppliers’ and customer’s different perceptions of innovation were also mentioned.