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The power of an installed base to combat lifecycle decline: The case of video games

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ABSTRACT

Declining demand in later stages of product lifecycles challenges managers. Especially in system markets, content providers must decide whether to publish new content in late lifecycle stages or wait for the next system generation. This study investigates whether content providers can compensate for declines in demand for a system by relying on the benefits offered by a large installed base in later lifecycle stages. Drawing on extensive market data from the video game industry – an underresearched but economically and culturally relevant category of the entertainment sector – this study examines ways to achieve such compensation. The data analyses show a negative association between the age of a system generation and content sales. However, an online multiplayer feature can counteract this negative effect by exploiting the large installed base and providing consumers with additional social value through direct network effects. These findings should help managers position their products more successfully in the late lifecycle stages of a particular system generation.

1. Introduction

Marketing product innovations in declining stages of their lifecycles constitutes a highly challenging task for managers. It is often accompanied by shrinking budgets and demand, along with less time available to amortize the new products. This challenge is particularly relevant for systems, which often arrive in generations and comprise interdependent products. Relevant examples are hardware platforms such as computers, smartphones, televisions, and industrial robots, along with their compatible software, as well as automobiles, motorcycles, stroller systems, e-book readers, payment systems, camera bodies and lenses, and espresso machines with capsules (Katz & Shapiro, 1994). Platform-based system markets have increasingly important effects on the economy (Eisenmann, Parker, & Van Alstyne, 2011; Gallaugher & Wang, 2002), especially in high-technology software industries such as video gaming (Landsman & Stremersch, 2011; Zhu & Zhang, 2010).

As customers start to expect a new system generation in the later stages of a product's lifecycle, they might strategically withhold their spending on content specific to the current system generation (delayed consumption), whose technology is soon to become outdated (e.g., stop buying CDs in anticipation of digital music options).[1] Yet the installed base (e.g., CD players) also has reached its maximum at this point, so managers face a dilemma: introduce new content for the current but mature system or focus on the next system generation, which starts with a lower installed base, leading to lower potential demand and revenue possibilities for new content. When development periods are long, content providers cannot afford to wait to introduce content for a mature generation. Instead, they use internal scale effects for learning to minimize development costs and seek to maximize the

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[1] In the music industry, platform generations with limited product lifecycles have included phonographs, cassette decks, and compact disc players, as well as digital music platforms such as iTunes (Bourreau, Gensollen, Moreau, & Waelbroeck, 2012).

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performance and platform fit of the content. However, content providers still face a challenge: how can they systematically address the peak of the installed base to counter declining demand and extend their products' lifecycle?

This article examines the declining product lifecycle stage of a system generation and applies product lifecycle theory, using the video games industry as a relevant example. It investigates this dynamic industry for three main reasons. First, the global impact of the video games market is growing, with estimated revenues of $101 billion in 2014 (Van der Meulen & Rivera, 2013). It is predicted to grow into the second largest entertainment industry, in terms of revenues, following only movies. According to the entertainment software association (theesa.com), 59% of U.S. consumers and more than 90% of teenagers play video games regularly, the average game purchaser is 35 years old, and 48% of all game players are women. Video games already are the most important entertainment product for many teenagers and young adults, with huge cultural significance (The Economist, 2011).

Second, despite its importance, the video game industry remains poorly investigated, especially compared with other entertainment industries, leaving unanswered a variety of questions, such that industry practitioners tend to rely on empirically unproven rules of thumb. Furthermore, the video game industry drives technology innovation and has exemplified the digital age from its very start, such that it often appears temporally in advance of other industries, which can learn from the innovations of the video games industry. Moreover, the fundamental characteristics of the video game market are common to many other two-sided markets.

Third, this industry offers a good example of a cyclical platform market, because the regular and frequent changes in platform generations emerge approximately every 6 years (Marchand & Hennig-Thurau, 2013). From 1972 to 2014, there have been approximately eight video game generations. Figs. 1 and 2 detail the lifecycles of the Microsoft Xbox 360, Sony PlayStation 3, and Nintendo Wii consoles of the seventh generation (2005–2014).

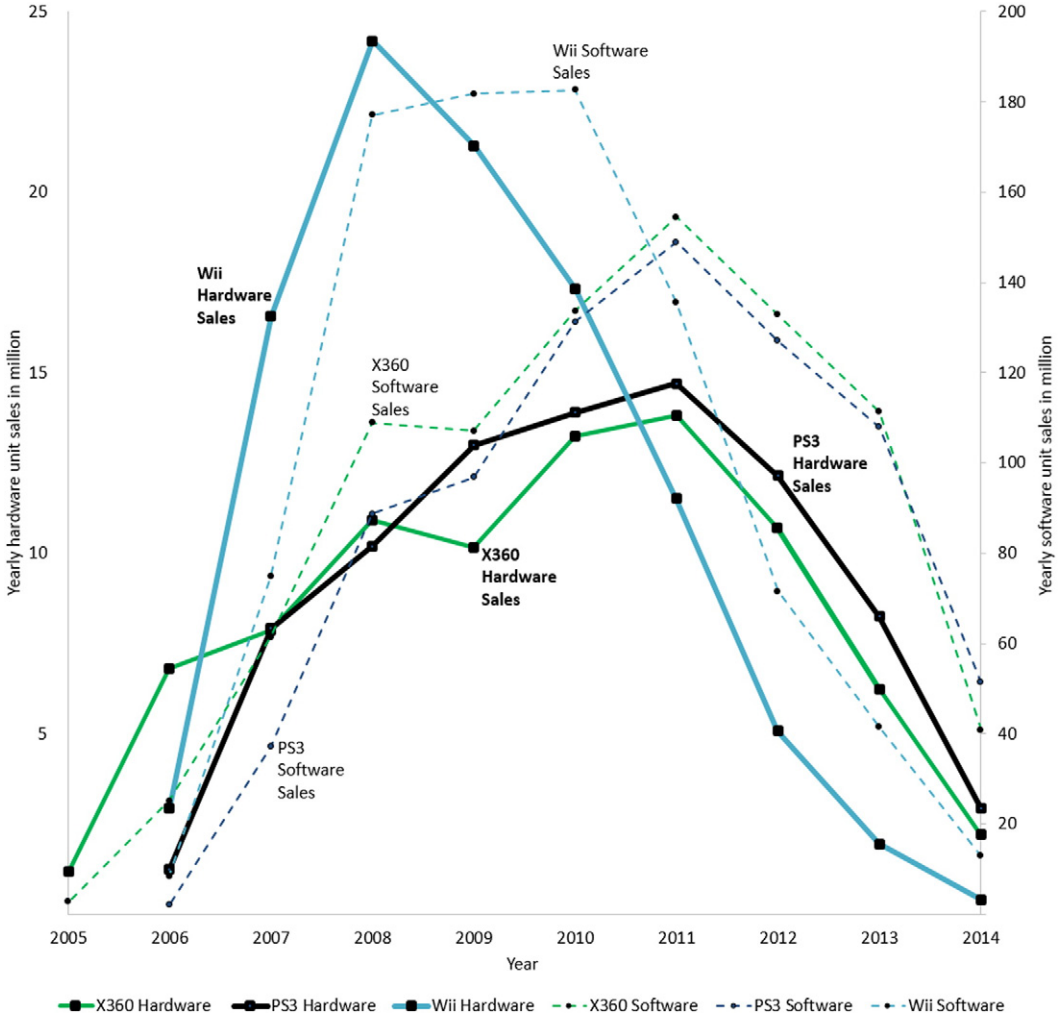

Fig. 1. System lifecycle of the seventh video game generation. Notes: Numbers represent the yearly global hardware and software unit sales in millions retrieved from vgchartz.com. X360 = Microsoft Xbox 360; PS3 = Sony PlayStation 3; Wii = Nintendo Wii.