Online Auctions of New Product Before and After Its Official Launch: Differences, Time Series Linkage, and Correlation with Stock Market

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ABSTRACT

This study investigates the online auction market of Xbox 360 consoles before and after its official launch. Among nine measures of online auctions, all except for one are significantly differed between online auctions before and after the official launch. The principal component analysis further visualizes the differences. By using auto-regression to analyze the relationship among success count, success rate, and winning price in time series, we find that success count and success rate can be predicted with its own past values in (t-1) and (t-2) periods. The winning price can be predicted with its own past value in (t-1) period. We find that the preannouncement and launch events do affect the stock price, trading volume, daily price range, price change, and market volatility. We also investigate the correlation coefficients between the online auction market and the stock market. We find various significant correlation coefficients among the measures of both markets in the concurrent and one-time lag scenarios. The managerial implications of the findings are also discussed.

KEYWORDS

Auto-Regression, New Product Launch, New Product Preannouncement, Online Auction, Stock Market

INTRODUCTION

New product development is an important product marketing strategy. New products help firms achieve sustainable revenue and growth as they replace old ones through customer re-purchases. New product development can also stimulate demands from potential consumers. This kind of strategy is critical to information technology (IT) firms because most IT products (both hardware and software) are physically durable, and new products or new updates could encourage consumers to keep buying and spending from a company. It is a common practice that hardware upgrades for smart phones and software upgrades for Operating Systems are frequently offered by IT firms such as Apple and Microsoft.

To succeed in market competitions, many IT firms invest heavily in new product research and development (R&D). For example, Apple’s and Microsoft’s R&D spending was US$10.9 billion and US$12.0 billion in 2016, respectively. IT firms typically preannounce new products for publicity and consumer awareness. After some time, the companies will then officially launch new products into the market. The length of the waiting period window from preannouncement to launch is from a few days to a few months as it depends upon companies and products. In the software industry, even “vaporware,” a product preannouncement strategy to lure competitors to react without actually
launching a new product, is occasionally observed. After a product preannouncement to the public, certain expectations are aroused from both users and vendors. Thus, a product preannouncement could create potential demands from users and potential supplies from vendors. The electronic marketplace in an online auction format provides a platform for buyers and vendors to meet and trade. This occurs for preannounced new products even before an official launch. The market for preannounced products is different from both the traditional market and futures market. It is for a new product that is not available to the sellers or buyers, and the key information, such as product quality and using experience, are not well-known to buyers or sellers. There are two types of markets for preannounced products, 1) pre-order market, which is typically B2C, and 2) online auction marketplace for preannounced products, which is typically C2C. The online auction marketplace keeps attracting many sellers and buyers because of low search costs, high interaction potential, and world-wide accessibility (Bakos, 1997). Sellers and buyers can achieve significant cost savings and enhance their surplus through online auction transactions (Van Heck & Vervest, 1998). Online auctions become an important component of electronic marketplaces. According to eBay Fast Facts, on December 31, 2018, the Internet auction house leader, eBay, had a record high of 179 million active users, which is over a 10% increase compared to the number of users in 2015. In the fourth quarter of 2018, eBay had new listings totaling a record of 1.2 billion at any given time. This is about 45% higher than that in the same quarter of 2005. Vendors can choose eBay to sell both new products and used products. Many vendors even use eBay to sell new products before and after their official launches.

In this study, we mainly investigate the following questions:

- Does the online auction market of new products before official launch differ from that after official launch? If yes, how?
- Do past auctions have any impact on current auctions of new products before and after official launch?
- Are there any relationships between the online auction market and the stock market before and after a new product official launch?

Although online auctions of existing products have gained the attention of researchers and many literature contributions have already been made, little has been examined regarding online auction differences and the linkage between the online auction market and the stock market before and after a new product’s official launch. In fact, introducing new products is an important event for a firm and its stock market value. The online auction market performance can be taken as an indicator of new product sales. Thus, the online auction market might have a certain relationship with the stock market. To the best of our knowledge, there are few existing studies on the market of preannounced products and other related topics in the literature. The above proposed research questions represent a new research field that have not been well-studied before. Although this is an exploratory study, we believe that it contributes to the literature and hope it will attract follow-up research.

To answer the above research questions, we use online auction data of the Microsoft Xbox 360 from eBay. The Microsoft Xbox 360 video game console product, which is the second-generation of the Xbox brand, was preannounced on May 12, 2005 and officially launched on November 22, 2005. The Xbox alongside Playstation and Nintendo, are the three major players in the game console product market (Kemerer, Dunn and Janansefat, 2017). We aim to use the Xbox 360 online auction data and Microsoft stock trading data to understand the basic features of the online auction market of the Xbox 360 before and after its official launch. Furthermore, we can explore the linkage between the online auction market and the stock market.

The paper is organized as follows: it summarizes a literature review following this introduction. Then, it presents the differences between online auctions of the Xbox 360 before and after its official launch. Next, it explores the role of past online auctions to predict current auctions. Then, it tries to determine the linkage between online auction trading and stock trading. After that, it discusses the managerial implication of the findings, and that is followed by the conclusion of the study.
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