Evolutionary Stages of e-Tailers and Retailers: Firm Value Determinants Model

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ABSTRACT

We have studied the evolutionary stages of pure e-tailers, click & mortar (C&M) and brick & mortar (B&M) retailers for three points of time: June 1999, June 2000, and June 2001. To evaluate the dynamic stages of e-tailing business as an innovative venture, we propose four stages: exploration, breakeven, growth, and maturity. The stages are measured by the impact of revenue and income on the firm value, and a regression model is adopted to formulate the model. To empirically examine the stages of e-tailers and retailers, we have collected 14 e-tailers, 112 C&M, and 75 B&M from the U.S. stock markets. According to this study, the proposed stage model explains the evolution of pure e-tailers very meaningfully. E-tailers were in the late exploration stage in 1999, breakeven stage in 2000, and growth stage in 2001. Unlike our hypothetical expectation, the stage model could not adequately explain the effect of online business to C&M. In this regard, the impact of online channel to traditional retailers was not revolutionary. In 1999 and 2000, the primary contributing factor to firm value of C&M was income, but in 2001, it was revenue. According to this result, investors were very conservative to the risky investment on the click business of traditional retailers. However, it turned out that C&M has performed better than B&M in terms of revenue, income, income/revenue, stock price, and market capitalization. It is noteworthy that the revenue effect of C&M in 2001 was significantly higher than that of B&M.

Keywords: Electronic commerce, e-tailer, stage theory, retailer, click and mortar, electronic marketing

INTRODUCTION

Electronic retailing (e-tailing) has been around for years, fundamentally impacting the structure of traditional retailing business (Rao, 1999, Turban et al. 2002). The stock price and market capitalization of pure e-tailers has skyrocketed till 1999 owing to its extraordinary market growth (Schultz and Zaman, 2001). So traditional retailers are obliged to jump into the opportunity of e-tailing business by opening an online retailing site as an additional channel. Although the hybrid of online and offline channels within a company supplement each other, there also exist conflicts between the two. When the channel conflict is severe, some companies like Egghead.com gave up the traditional channels, exclusively depending on the online channel, which turned out a failure. Barnes & Noble has spun off the e-tailing business as BarnesandNoble.com. In this manner, there was a minor migration to pure e-
tailing (Sandoval, 1999). However, the major trend is the traditional retailers’s shift to hybrid channels, because the growth opportunity of e-tailing is too big to neglect and also because the cash-cow of traditional business should not be given up too hastily (Kane, 1999; Marucca, 1999; Scheppler, 2001). Nevertheless, 75 out of 187 listed retailers in the U.S. stock market, which we have studied in this research, still have not opened the online channel.

Let us formally define the three business models in retail business:

- **Pure Click or Pure e-Tailer** is a pure online retailer without physical stores. Some pure e-tailers may have some promotional physical stores, but let us categorize this kind of company to pure e-tailers in this study.

- **Click and Mortar (C&M)** is a traditional retailer(s) with an additional online channel.

- **Brick and Mortar (B&M)** is a traditional retailer(s) without an online channel.

Our concern is a comparative analysis on the dynamic performance of these business models with a view of stage theory (Lee, 2000; Lee et al., 2000). We would like to know where the status of pure e-tailers is, and what the impacts of adding online stores to traditional physical stores are. For this study, we evaluate the performance of three business models at three points of time: June 1999 (denoted \( T_{1999} \)), June 2000 (\( T_{2000} \)), and June 2001 (\( T_{2001} \)).

As a reference stage theory model, we propose the Firm Value Determinants Model which uses regression models to measure the impact of revenue and income on firm value. Assumption of the model is that in the early stage of innovation, by adopting e-tail channels, the e-tailers can grow their revenue very fast at the cost of negative income. After the shakeout, the failed companies will disappear, be acquired or merged, and the average income of survivors will be improved reaching zero. The revenue of surviving companies will grow while gaining income. However, as the stage gets matured, the income will become the primary concern more than the revenue growth. Based on this assumption, we propose four stages of e-tailing business: **exploration**, **breakeven**, **growth**, and **maturity**. To identify the stages, we adopt a regression model that selects the primary factors—revenue and/or income—which determine the firm values.

With this stage model, we evaluate the stages of three business models for \( T_{1999}-T_{2001} \). However, the fluctuation of traditional business in annual revenue growth and income is a fact of business life. So evaluating stages of traditional business purely based on revenue and income fluctuation is not adequate. Since we need to know the stock prices of the companies, we have selected the e-tailers and retailers listed in the U.S. stock markets (NYSE, NASDAQ, and AMEX). The U.S. stock markets are selected because the U.S. market has the largest number of companies than any other country.

In the second section, we review the stage theories in the literature and propose the stage theory for e-tailers and the regression model that can compute the stage. We then explain the implications of stages in the e-tailing and retailing business, and describe the measurement of factors and data collection. The next section explores the behaviors of revenue, income, and market capitalization during the study period. We then propose the regression models that can estimate the impact of revenue and income on firm value. The next section derives the stages of e-tailers, B&M, and C&M for \( T_{1999}-T_{2001} \). The paper
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