## Competition and the Bad News Principle in a Real Options Framework<sup>\*</sup>

Katsumasa Nishide<sup>†</sup> and Kyoko Yagi<sup>‡</sup>

(First version: September 24, 2012) (Current version: November 29, 2012)

**Abstract.** We study the investment timing problem where two firms that compete for investment preemption know in advance the time at which the economic condition changes. We show that the so-called Bad News Principle applies to the leader firm's investment decision near maturity in many cases. This result indicates that the option value to wait does have an impact even in a competitive situation, which is in contrast to the previous literature.

**Keywords:** Bad news principle, investment timing, competition, real options.

JEL classification: D92, G32, D43

<sup>\*</sup>Numerical assistance by Dr. Hajime Fujiwara is greatly appreciated. The authors thank the participants at JAROS 2012 Conference, especially Makoto Goto and Motoh Tsujimura for their comments. The first author wishes to thank the financial support by the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) Grand in Aid for Scientific Research (C) #23530362. Any errors found are, of course, of the authors. The latest version of this paper is available at http://ssrn.com/abstract=2012267.

<sup>&</sup>lt;sup>†</sup>Corresponding author. International Graduate School of Social Sciences, Yokohama National University. 79-4 Tokiwadai, Hodogaya-ku, Yokohama 240-8501, Japan. E-mail: knishide@ynu.ac.jp.

<sup>&</sup>lt;sup>‡</sup>Department of Management Science and Engineering, Akita Prefectural University. 84-4 Ebinokuchi, Tsuchiya, Yurihonjo-shi, Akita 015-0055, Japan. E-mail: yagi@akita-pu.ac.jp.