## Free Entry and Social Inefficiency under Co-opetition\*

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## Abstract

We investigate the social desirability of free entry in the co-opetition model in which firms compete in a homogeneous product market while sharing common property resources that affect market size or consumers' willingness to pay for products. We show that free entry leads to socially excessive or insufficient entry into the market in the case of non-commitment co-opetition, depending on the magnitude of "business stealing" and "common property" effects of entry. On the other hand, in the case of pre-commitment co-opetition, free entry leads to excess entry and a decline in the common property resources. Interestingly, in the latter case, the excess entry result of Mankiw and Whinston (1986) and Suzumura and Kiyono (1987) holds even when there are no entry (set-up) costs for entrants. These results have important policy implications for entry regulations.

**Keywords** Excess entry; Free entry; Co-opetition; Entry regulations; Common property resource **JEL Code** L13; D43; L51

## 1 Introduction

In many industries, firms compete for market share while cooperating in the management of "common property resources" that affect the market size or consumers' willingness to pay for products. This simultaneous competition and cooperation is called "co-opetition" (Brandenburger and Nalebuff 1996). For example, retail stores in shopping malls, tourist sites, and food courts share common property resources such as parking lots, historic ruins and a natural environment, and dining areas, respectively. The quality of the common property resources affects the market size and/or consumers' willingness to pay for the products or services, and high quality of the resources generates non-excludable benefits for firms in the industry. Therefore, each firm's investment in the common property resources—such as eliminating congestion by expanding parking lots in shopping malls, preserving historic ruins and natural environment of tourist sites, and maintaining a clean, hygienic environment in food courts—create public goods from which all the firms benefit. Another example of such co-opetitive behavior is generic advertising for various commodities, such as tea, oranges, milk, butter, cheese, beef, fish, and eggs. Creating a better product image generates non-excludable benefits for all producers who provide the same products. In

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