进入与退出的壁垒：
理论及其应用

赵 农 刘小鲁／著

Barriers to Entry and Exit:
Theory and Application

中国市场出版社
China Market Press

进入与退出的壁垒：理论及其应用

赵农　刘小鲁／著

Barriers to Entry and Exit: Theory and Application

中国市场出版社
China Market Press

图书在版编目（CIP）数据

进入与退出的壁垒：理论及其应用/赵农，刘小鲁著．北京：中国市场出版社，2006.10

ISBN 7-5092-0104-7

Ⅰ．进…　Ⅱ．①赵…②刘…　Ⅲ．企业管理　Ⅳ．F270

中国版本图书馆CIP数据核字（2006）第111577号

书　　名：进入与退出的壁垒：理论及其应用
著　　者：赵　农　刘小鲁
责任编辑：郭爱东
出版发行：中国市场出版社
地　　址：北京市西城区月坛北小街2号院3号楼（100837）
电　　话：编辑部（010）68034190　读者服务部（010）68022950
　　　　　发行部（010）68021338　68020340　68053489
　　　　　　　　　　　68024335　68033577　68033539
经　　销：新华书店
印　　刷：河北省高碑店市鑫宏源印刷厂
规　　格：880×1230毫米　1/32　10.25印张　270千字
版　　本：2007年1月第1版
印　　次：2007年1月第1次印刷
书　　号：ISBN 7-5092-0104-7/F·60
定　　价：28.00元

Introduction

The Theory of Industrial Organization has long been focusing on topics of barriers to entry and exit, which are classified as, according to their origins, structural, behavioral and institutional barriers. Barriers to entry generally relate to industrial monopoly and thereby, normally lead to dead-weight losses. Barriers to exit usually derive from sunk cost caused by durable specific assets. When the demand declines or excessive entry exists, barriers to exit can result in excessive competition that will further lead to deficiency in most enterprises. This book, on the basis of introducing relevant theoretical background, will mainly focus on the discussion of behavioral barriers to entry and institutional barriers to entry and exit.

According to the standard model of monopoly, the pricing mechanism in equilibrium should satisfy the principle that marginal revenue equals to marginal cost. However, when economists restrain their research in some certain industries, such as steel or cigarette, they surprisingly found that long—term quantities in these industries exceed the optimal level required by profit maximization. Bain (1949) explained these phenomena as strategies of entry deterrence adopted by incumbents. He argued that, by setting excessive product quantity, incumbent can avoid inducing potential enterers whose entry may make the incumbent's expected profit to decrease. Thus, if the discounted profit of excessive quantity setting strategy outweighs that can be brought by setting the monopoly price, the incumbent is naturally willing to expand its product quantity to deter potential entry. This informal statement forms the initial idea about limit pricing.

On purpose of building a more formalized framework of how the exact limit price is determined, Sylos (1962) and Modigliani (1958), on the basis of Bain's logic, developed the so-called "B – S – M" model, in which a core assumption – the "Sylos' postulation" requiring that incumbent, when potential enterer enters, sustains rather than cut down his original quantity is employed as the most essential foundation of their arguments.

However, quantity sustaining can never act as a sound assumption and a credible threaten. This defect of the "B – S – M" model initiated economists to reconsider the issue of limit pricing in the situation of preemptive committing. That is, incumbent can, through making irreversible investment and expanding its producing capability, rationalize its behavior of quantity sustaining and turn its commitment to be credible.

The inherent postulation of the preemptive commitment model is that the incumbent has the first-move advantage. Thus, the preemptive commitment model, strictly speaking, only refers to short-term analysis, although some economists (such as Spence, 1977) claimed that their works analyzed price path in the long run.

In this book, we will extend the preemptive commitment model to long-term analysis. In the short run, as the incumbent can make irreversible investment prior to the potential enterer, the optimal strategies of these two firms will ultimately lead to a Stackelberg equilibrium. But if we change the analysis into the long run, things will be different, since although the incumbent can use its first-move advantage to achieve the leading quantity of the Stackelberg equilibrium firstly, its producing capability may be exceeded by the potential enterer. This is because of the fact that, while the producing capability of potential enterer is still increasing, incumbent's capability may decrease, due to depreciation of its assets. Following this logic, the analysis of this book shows that, in the long run, the ultimate equilibrium will turn out to be a Cournot kind. Moreover, this book demonstrates that, on contrary to the traditional theory, preemptive commitment can help select out the most efficient potential enterer and therefore could contribute to enhancing social welfare.

The topic of institutional barriers to entry, which is one of the most significant issues in China's economy, is another main topic in this book. Differing from many traditional works that focus on rent-seeking, this book illustrates influences of institutional barriers to entry on product quality in an experience-goods market with low demand elasticity. The novelty of this analysis is that it adds illegal potential enterer into consideration. In the model, the incumbent of an administratively controlled market faces a illegal potential enterer who forges the incumbent's product in order to evade the institutional barriers to Entry. Besides, a fiscal-income-maximizing government is employed. The analysis shows that, due to the unwillingness of the government to give up the fiscal income from fining illegal firms, the government has no enough incentive to fight against counterfeiting thoroughly. In the equilibrium, setting institutional barriers to entry will not help improve the average product quality, but may even cause the average quality to deteriorate.

While theories on barriers to entry have achieved great progress, works on barriers to exit turn out to be relatively fewer in western economic theories. But the institutional barriers to exit have long been emphasized by Chinese economists. For instance, the issue of institutional barriers to exit faced by state-owned enterprises has already been discussed for more than seven years.

One negative effects of institutional exit barrier is that it may lead to a distorted industrial structure: when market demand declines due to some exogenous disturbance, institutional exit barrier will cause excessive competition to exist prevalently. This mechanism can partially explain the deflation of China's economy development around 1998. What this book is going to focus on is how this distortion can further influence the effectiveness of macroeconomic policies.

Moreover, this book will also refer to the discussion of what factors can influence the strength of institutional barriers to exit. Although this issue has already appealed attention of numerous economists, existing relevant discussions, unfortunately, cannot be considered as having included the strategic interactions between local governments, which is essential in the determination of the institutional barriers to exit exerted upon local state-owned enterprises. In fact, once each local government sets institutional barriers to exit in its precinct, it automatically place pressure from excessive competition on firms in other local areas, thus causes the competition to bear a certain feature of the war of attrition, which forms the novelty of this book in analyzing the institutional barriers to exit in China.

The whole discussions obeying the logic order mentioned above are divided into 14 Chapters. Briefly speaking, these chapters are organized as follows:

Chapter 1 refers to the development of theories on entry and barriers to exit and briefly discussed the inherent defects of these theories. Moreover, it outlines research processes and main ideas of this book.

In Chapter 2, the formation of barriers to entry and monopoly power is introduced in detail. Besides, it introduces definitions on natural monopoly and artificial monopoly and classifies several types of barriers to entry.

The discussion of the development of theories on entry deterrence is arranged in Chapter 3, in which the theoretical evolution of entry deterring model with characteristics from limit pricing to various preemptive commitments by incumbents is high – lighted.

Chapter 4 focuses on models of rational predation, including signaling model, signal jamming model and the "deep – pocket" (long purse) story. Explanations on predation relating to diversification are also included.

Chapter 5 introduces the foundamental characteristic of model of the war of attrition and its theoretical forecasting on firms′exit order. The main contents of this chapter directly form the theoretical preparation for discussions in Chapter 11.

Chapter 6 describes the cause and mechanism of barriers to exit and its influences on firms′entry – exit decision – making. It also covers illustrations on the relationship between barriers to exit and entry and describes possible collusions among incumbents under the restraint of barriers to exit.

Chapter 7 presents a long – term dynamic model on entry deterrence. On the basis of discussing defects of the short – term preemptive committing model, this chapter develops a framework describing the process of optimal entry path selecting by potential enterers on purpose of managing to enter. This model implies that preemptive committing creates a selecting mechanism which could guarantee that the less efficient firms will be eliminated through entry process.

Chapter 8 discusses social welfare of potential competition. This chapter points out that, when sunk cost exists, potential competition can help the market to achieve quasi – efficiency. Preemptive committing, an important aspect of potential competition, is essential in enhancing dynamic social welfare.

Chapter 9 demonstrates the welfare effects of institutional barriers to entry and exit. Through constructing a "quasi-competition" model, this chapter provides explanations on the formation of prevalent excessive entry in China. Moreover, this chapter also points out the nature of industrial distortion in a market-economy and offers relevant policy advices.

The influences of institutional barriers to exit on industrial structure have already resulted in lowering the effectiveness of macroeconomic policies in China. Due to the excessive entry caused by institutional barriers to exit, market will, during a long period, turn out to be profitless. This will further help form pessimistic expectations among firms, which will lead to a decrease in the effectiveness of macroeconomic policies. The detailed argument is presented in Chapter 10.

In Chapter 11, a model of government – dominated war of attrition is built in order to display some important factors determining the strength of institutional barriers to exit exerted on China's local state-owned enterprises. The key argument of this chapter is that, the level of the institutional barriers to exit is positively correlated with the extent of the loose constraint of budgeting faced by local government.

Chapter 12 discusses the product quality in a government – controlled experience goods market with low elasticity of demand. The analysis suggests that a representative fiscal – income – maximizing government has no incentive to engaging forge products with its maximum effort. That is, it will accommodate the entry of illegal firm producing counterfeits. Under such a kind of control, the average product quality will not increase, but may decrease with a relatively high probability.

Chapter 13, through econometrical analysis, discusses the relationship between the strength of institutional barriers to entry and industrial average profit ratio. In Chapter 14, case study of China's telecom industry under the topic of institutional barriers to entry is made.

目　录

Contents