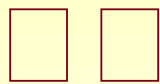


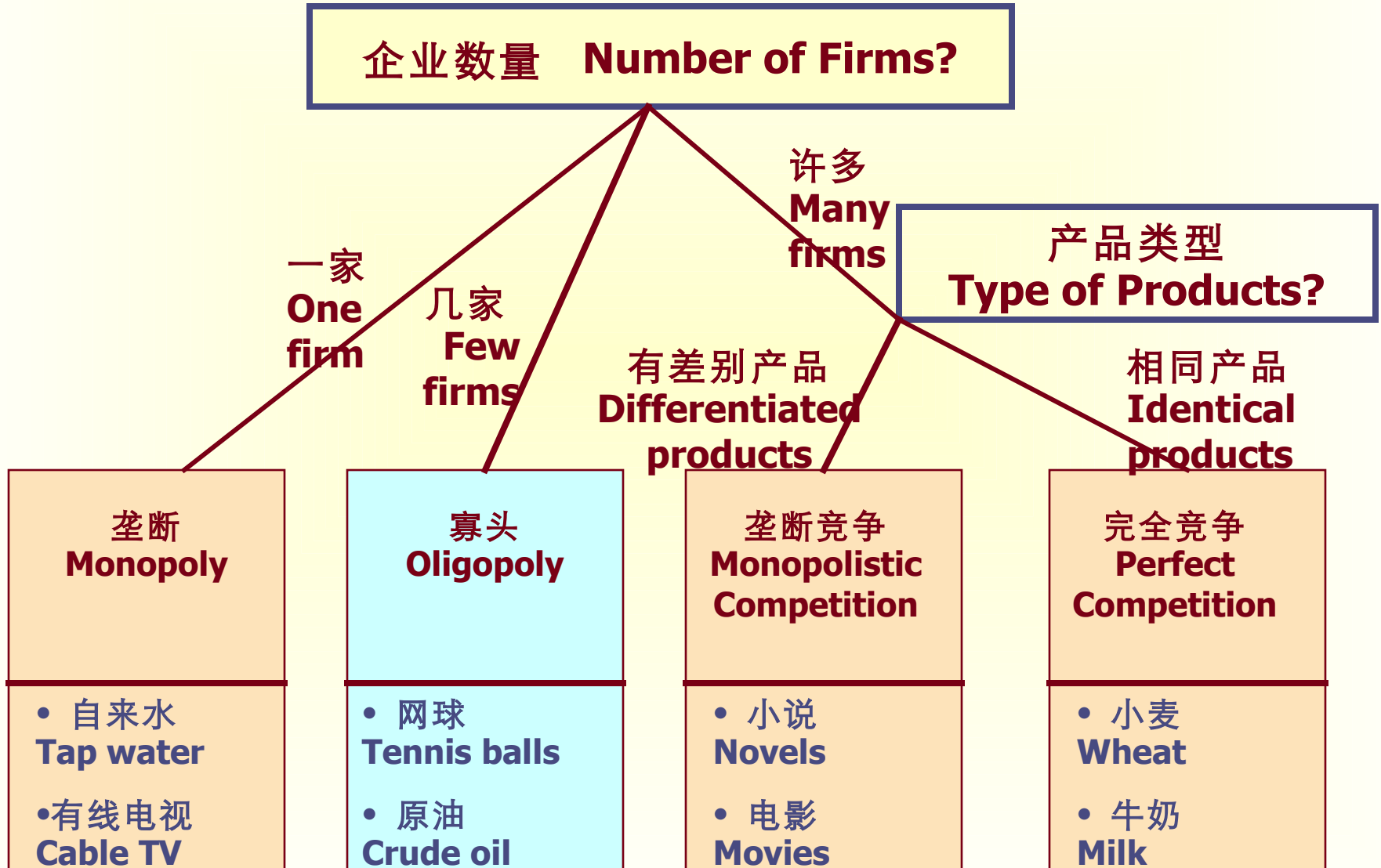
第十七章



Oligopoly

市场结构的四种类型

The Four Types of Market Structure



不完全竞争市场的类型

Types of Imperfectly Competitive Markets

寡头 Oligopoly

只有少数几个卖者，每个卖者提供与其他企业相似或相同的产品。

Only a few sellers, each offering a similar or identical product to the others.

垄断竞争 Monopolistic Competition

许多企业出售相似但不相同产品。

Many firms selling products that are similar but not identical.

寡头市场的特征

Characteristics of an Oligopoly Market

❧ 寡头市场的本质是只有少数几个卖者。

The essence of an oligopolistic market is that there are only a few sellers.

❧ 市场上任何一个卖者的行动都对其他卖者的利润有重大影响。

The actions of any one seller in the market can have a large impact on the profits of all the other sellers.

❧ 寡头市场以一种竞争企业不具备的方式相互依赖。

Oligopolistic firms are interdependent in a way that competitive firms are not.

寡头市场的特征

Characteristics of an Oligopoly Market

由于只有少数几个卖者，寡头市场的关键特征是合作与利己之间的冲突。

Because of the few sellers, the key feature of oligopoly is the tension between cooperation and self-interest.

寡头市场的特征

Characteristics of an Oligopoly Market

✎ 最好是合作，象垄断那样生产少量产品并把价格定在高于边际成本的地方。

Best off

cooperating and acting like a monopolist by producing a small quantity of output and charging a price above marginal cost.

✎ 但由于每个寡头只关心自己的利润，所以有强大的激励使企业集团难以维持垄断的结果。

Yet because each

oligopolist cares about only its own profits, there are powerful incentives at work that hinder a group of firms from maintaining the monopoly outcome.

寡头市场的特征

Characteristics of an Oligopoly Market

为了分析象在寡头市场上存在的合作与利己之间的冲突，需要利用**博弈论**的工具。

To analyze the tension between cooperation and self-interest as exists in oligopolistic markets, it is necessary to use tools of **game theory**.

双头的例子

A Duopoly Example

双头是只有两个卖者的寡头。
双头是最简单的寡头模型。

A **duopoly** is an oligopoly with only two members. It is the simplest type of oligopoly.

双头的例子：水的需求表

A Duopoly Example: Demand Schedule for Water

Quantity	Price	Total Revenue
0	\$120	\$ 0
10	110	1,100
20	100	2,000
30	90	2,700
40	80	3,200
50	70	3,500
60	60	3,600
70	50	3,500
80	40	3,200
90	30	2,700
100	20	2,000
110	10	1,100
120	0	0

双头的例子：价格和供给量

A Duopoly Example: Price and Quantity Supplied

在完全竞争的市场中，水的价格等于边际成本即零。

The price of water in a perfectly competitive market would be driven to where the marginal cost is zero:

$$P = MC = \$0$$

$$Q = 120 \text{ gallons}$$

在垄断的市场中，价格和数量使垄断者的总利润最大化。

The price and quantity in a monopoly market would be where total profit is maximized:

$$P = \$60$$

$$Q = 60 \text{ gallons}$$

竞争、垄断和卡特尔

Competition, Monopolies, and Cartels

双头可以同意垄断的结果。

The **duopolists** may agree on a monopoly outcome.

勾结 Collusion

两个企业就生产的数量和收取的价格达成一致 The two firms may agree on the quantity to produce and the price to charge.

卡特尔 Cartel

两个企业联合起来，协调行动。

The two firms may join together and act in unison.

竞争、垄断和卡特尔

Competition, Monopolies, and Cartels

- ◆ 尽管寡头希望形成卡特尔并赚到垄断利润，但这往往是不可能的。

Although oligopolists would like to form cartels and earn monopoly profits, often that is not possible.

- ◆ 反托拉斯法把禁止寡头之间的公开协议作为公共政策的重点。

Antitrust laws prohibit explicit agreements among oligopolists as a matter of public policy.

- ◆ 有时卡特尔成员之间对如何瓜分利润的争斗也使它们之间的协议成为不可能。

Squabbling among cartel members over how to divide the profit in the market sometimes makes agreement among them

寡头的均衡

Equilibrium for an Oligopoly

- ◆ 假设合作是不可能的；因而双方独立选择自己的产量，以使自己单独的利润最大化。

Suppose cooperation is impossible. Thus each side chooses its own output *independently*, and does so to maximize its own profits.

- ◆ 当每个寡头选择自己的产量时，他必须把对方的产量考虑在内。

In doing so, it must take the other's output into account.

寡头的均衡

Equilibrium for an Oligopoly



寡头的均衡结果

水的需求表
Demand Schedule for Water

Quantity	Price	Total Revenue
0	\$120	\$ 0
10	110	1,100
20	100	2,000
30	90	2,700
40	80	3,200
50	70	3,500
60	60	3,600
70	50	3,500
80	40	3,200
90	30	2,700
100	20	2,000
110	10	1,100
120	0	0

当预计对方 (杰克) 选 择产量为...	我 (吉尔) 最优的产量 选择是.....	并获得利润
...		
0	60	3,600
10	60(50)	3,000
20	50	2,500
30	50(40)	2,000
40	40	1,600
50	40(30)	1,200
60	30	900
.....

纳什均衡

Nash Equilibrium

纳什均衡是指这样的情况：相互作用中的每一个经济人，在其他方所选择的策略为既定时，选择了自己的最优策略。

A **Nash equilibrium** is a situation in which economic actors interacting with one another each choose their best strategy given the strategies that all the others have chosen.

纳什均衡

Nash Equilibrium

纳什均衡是一组策略（每个参与者对应其中一个），它使得在其他所有参与者保持该策略组合规定的策略时，没有参与者可以通过改变到其他某个可行的策略而收益更多。

A **Nash Equilibrium** in a game is *a list of strategies*, one for each player, such that no player can get a better payoff by switching to some other strategy that is available to her while all the other players adhere to the strategies specified for them in the list.

寡头的均衡

Equilibrium for an Oligopoly

Quantity	Price	Total Revenue
0	\$120	\$ 0
10	110	1,100
20	100	2,000
30	90	2,700
40	80	3,200
50	70	3,500
60	60	3,600
70	50	3,500
80	40	3,200
90	30	2,700
100	20	2,000
110	10	1,100
120	0	0

垄断的市场结果

寡头的市场结果

竞争的市场结果

寡头的均衡

Equilibrium for an Oligopoly

✎ 如果寡头企业各自追求自己的利益，可能的结果是：

Possible outcome if oligopoly firms pursue their own self-interests:

✎ 总产量大于垄断产量但小于竞争产量

Joint output is greater than the monopoly quantity but less than the competitive industry quantity.

✎ 市场价格低于垄断价格但高于竞争价格

Market prices are lower than monopoly price but greater than competitive price.

✎ 总利润小于垄断利润

Total profits are less than the monopoly profit.

寡头数量如何影响市场结果

How the Size of an Oligopoly Affects the Market Outcome

ㄅ （与垄断时类似）在做出增加或者减少产量的边际决策时，每个卖者都要考虑两种效应：
In making the marginal decision on increasing/decreasing one unit of its production, each seller weighs two effects:

ㄅ **产量效应**：由于价格高于边际成本，在现行价格上多销售将增加利润。

The **output effect**: Because price is above marginal cost, selling more at the going price raises profits.

ㄅ **价格效应**：提高产量将会降低价格并减少每一单位既往销售量的利润。

The **price effect**: Raising production lowers the price and the profit per unit

寡头数量如何影响市场结果

How the Size of an Oligopoly Affects the Market Outcome

📖 卖者数目的增加如何影响这两种效应

How increasing the number of sellers affects these two effects:

📖 随着寡头数量增加，价格效应在减少。

As the oligopoly grows in size, the magnitude of the *price effect* falls.

📖 当寡头数量增加到极大时，价格效应几乎消失，只剩下了产量效应。

When the oligopoly grows very large, the price effect disappear altogether, leaving only the *output effect*.

寡头数量如何影响市场结果

How the Size of an Oligopoly Affects the Market Outcome

随着寡头市场上卖者数目的增加，寡头市场越来越象竞争市场。

As the number of sellers in an oligopoly grows larger, an oligopolistic market looks more and more like a competitive market.

价格趋近于边际成本，生产量趋近于社会有效率的水平。

The price approaches marginal cost, and the quantity produced approaches the socially efficient level.

博弈论与合作经济学

Game Theory and the Economics of Cooperation

◆ **博弈论**研究人们在各种策略情况下如何行事。 **Game theory** is the study of how people behave in strategic situations.

◆ **策略决策**指的是如下的情形：每个人在决定采取什么行动时，必须考虑其他人对这种行动作出什么反应。

Strategic decisions are those in which each person, in deciding what actions to take, must consider how others might respond to that action.

囚犯的两难处境

The Prisoners' Dilemma

波宁的决策

Bonnie's Decision

坦白 Confess

保持沉默 Remain Silent

		坦白 Confess	保持沉默 Remain Silent
坦白 Confess 克莱德的决策 Clyde's Decision	坦白 Confess	Bonnie gets 8 years 波宁入狱 8 年 Clyde gets 8 years 克莱德入狱 8 年	Bonnie gets 20 years 波宁入狱 20 年 Clyde goes Free 克莱德自由
	保持沉默 Remain Silent	Bonnie goes free 波宁自由 Clyde gets 20 years 克莱德入狱 20 年	Bonnie gets 1 year 波宁入狱 1 年 Clyde gets 1 year 克莱德入狱 1 年

囚犯的两难处境

The Prisoners' Dilemma

优势策略是指，无论另外的参与者采用什么策略，它都是某一参与者所遵循的最好策略。

The **dominant strategy** is the best strategy for a player to follow regardless of the strategies pursued by other players.

优势策略均衡（即每个参与者的优势策略构成的均衡）肯定是纳什均衡；但不是所有的纳什均衡都由优势策略构成。

囚犯的两难处境

The Prisoners' Dilemma

囚犯的两难处境表明了维持合作的困难

The prisoners' dilemma provides insight into the difficulty in maintaining cooperation.

人们（企业）经常不能互相合作，尽管合作可以使他们都受益。

Often people (firms) fail to cooperate with one another even when cooperation would make them better off.

囚犯的两难处境

The Prisoners' Dilemma

合作之所以难以维持，是因为合作不是单个人的最好利益。
Cooperation is difficult to maintain, because cooperation is not in the best interest of the individual player.

杰克和吉尔的寡头博弈

Jack and Jill's Oligopoly Game

		杰克的决策 Jack's Decision	
		出售 40 加仑 Sell 40 gallons	出售 30 加仑 Sell 30 gallons
吉尔的决策 Jill's Decision	出售 40 加仑 Sell 40 gallons	<div>Jack gets \$1,600 profit 杰克利润 1600 美元</div> <div>Jill gets \$1,600 profit 吉尔利润 1600 美元</div>	<div>Jack gets \$1,500 profit 杰克利润 1500 美元</div> <div>Jill gets \$2,000 profit 吉尔利润 2000 美元</div>
	出售 30 加仑 Sell 30 gallons	<div>Jack gets \$2,000 profit 杰克利润 2000 美元</div> <div>Jill gets \$1,500 profit 吉尔利润 1500 美元</div>	<div>Jack gets \$1,800 profit 杰克利润 1800 美元</div> <div>Jill gets \$1,800 profit 吉尔利润 1800 美元</div>

囚徒困境式的寡头博弈

Oligopolies as a Prisoners' Dilemma

		伊拉克的决策 Iraq's Decision	
		高产量 High Production	低产量 Low Production
伊朗的决策 Iran's Decision	高产量 High Production	<div>Iraq gets \$40 billion 伊拉克得 40 亿美元</div> <div>Iran gets \$40 billion 伊朗得 40 亿美元</div>	<div>Iraq gets \$30 billion 伊拉克得 30 亿美元</div> <div>Iran gets \$60 billion 伊朗得 60 亿美元</div>
	低产量 Low Production	<div>Iraq gets \$60 billion 伊拉克得 60 亿美元</div> <div>Iran gets \$30 billion 伊朗得 30 亿美元</div>	<div>Iraq gets \$50 billion 伊拉克得 50 亿美元</div> <div>Iran gets \$50 billion 伊朗得 50 亿美元</div>

囚徒困境式的寡头博弈

Oligopolies as a Prisoners' Dilemma

自利使得寡头很难维持合作的结果，即低产量、高价格和垄断利润。

Self-interest makes it difficult for the oligopoly to maintain a cooperative outcome with low production, high prices, and monopoly profits.

共有资源博弈

A Common-Resources Game

埃克森的决策 Exxon's Decision

打两口井 Drill Two Wells

打一口井 Drill One Well

打两口井
Drill Two Wells
阿尔科的决策
Arco's Decision

打一口井
Drill One Well

埃克森的决策 Exxon's Decision		打两口井 Drill Two Wells	打一口井 Drill One Well
阿尔科的决策 Arco's Decision	打两口井 Drill Two Wells	<div>Exxon gets \$4 million profit 埃克森得 4 百万</div> <div>Arco gets \$4 million profit 阿尔科得 4 百万</div>	<div>Exxon gets \$3 million profit 埃克森得 3 百万</div> <div>Arco gets \$6 million profit 阿尔科得 6 百万</div>
	打一口井 Drill One Well	<div>Exxon gets \$6 million profit 埃克森得 6 百万</div> <div>Arco gets \$3 million profit 阿尔科得 3 百万</div>	<div>Exxon gets \$5 million profit 埃克森得 5 百万</div> <div>Arco gets \$5 million profit 阿尔科得 5 百万</div>

做广告博弈

An Advertising Game

万宝路的决策 **Marlboro's Decision**

做广告 **Advertise**

不做广告 **Don't Advertise**

做广告
Advertise

骆驼的决策
Camel's Decision

不做广告
Don't Advertise

	做广告 Advertise	<p>Marlboro gets \$3 billion profit 万宝路得 30 亿利润</p> <p>Camel gets \$3 billion profit 骆驼得 30 亿利润</p>	<p>Marlboro gets \$2 billion profit 万宝路得 20 亿利润</p> <p>Camel gets \$5 billion profit 骆驼得 50 亿利润</p>
		<p>Marlboro gets \$5 billion profit 万宝路得 50 亿利润</p> <p>Camel gets \$2 billion profit 骆驼得 20 亿利润</p>	<p>Marlboro gets \$4 billion profit 万宝路得 40 亿利润</p> <p>Camel gets \$4 billion profit 骆驼得 40 亿利润</p>
		做广告 Advertise	不做广告 Don't Advertise

军备竞赛博弈

An Arms-Race Game

美国的决策

Decision of the United States (U.S.)

扩充军备 Arm

裁军 Disarm

苏联的决策
Decision of
the Soviet
Union
(USSR)

扩充军备
Arm

裁军
Disarm

Decision of the United States (U.S.)	扩充军备 Arm	裁军 Disarm
苏联的决策 Decision of the Soviet Union (USSR)	<p>美国危险 U.S. at risk</p> <p>苏联危险 USSR at risk</p>	<p>美国危险并软弱 U.S. at risk and weak</p> <p>苏联安全并强大 USSR safe and powerful</p>
	<p>美国安全并强大 U.S. safe and powerful</p> <p>苏联危险并软弱 USSR at risk and weak</p>	<p>美国安全 U.S. safe</p> <p>苏联安全 USSR safe</p>

为什么人们有时能合作

Why People Sometimes Cooperate

当企业都非常在乎未来利润时，它们会在重复博弈中合作，而不为了获得一次性的好处而在一次博弈中欺骗。

Firms that care about future profits will cooperate in repeated games rather than cheating in a single game to achieve a one-time gain.

针对寡头的公共政策

Public Policy Toward Oligopolies

从整个社会的角度看，寡头之间的合作是不合意的，因为它使产量太低价格太高。

Cooperation among oligopolists is undesirable from the standpoint of society as a whole because it leads to *production that is too low* and *prices that are too high*.

贸易限制与反托拉斯法

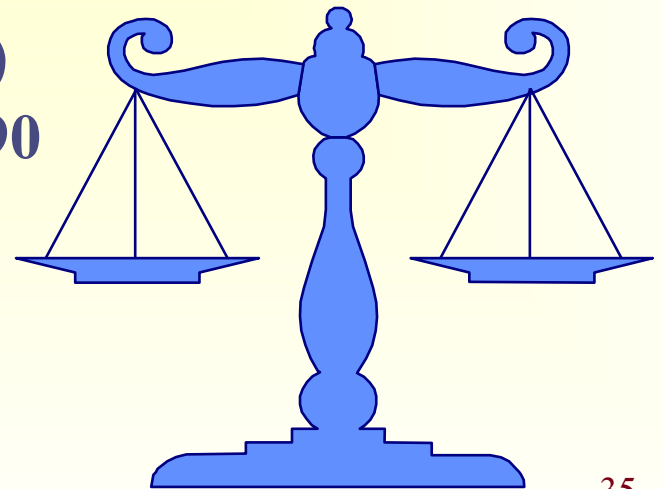
Restraint of Trade and the Antitrust Laws

📖 反托拉斯法把限制贸易或企图垄断市场定为非法。

Antitrust laws make it illegal to restrain trade or attempt to monopolize a market.

📖 谢尔曼反托拉斯法（1890）
Sherman Antitrust Act of 1890

📖 克莱顿法（1914）
Clayton Act of 1914



关于反托拉斯政策的争议

Controversies over Antitrust Policy

📖 反托拉斯政策有时可能不允许有潜在正面效果的商业行为。

Antitrust policies sometimes may not allow business practices that have potentially positive effects:

📖 转售价格控制 Resale price maintenance

📖 掠夺性定价 Predatory pricing

📖 搭售 Tying

转售价格控制

Resale Price Maintenance

转售价格控制（或称公平贸易）： 供应商（比如批发商）要求零售商向顾客收取指定的价格。

Resale price maintenance (or fair trade) occurs when suppliers (like wholesalers) require the retailers that they sell to, to charge customers a specific amount.

掠夺性定价

Predatory Pricing

掠夺性定价：大企业减价的动机是把它的竞争对手赶出市场。

Predatory pricing occurs when a large firm begins to cut the price of its product(s) with the intent of driving its competitor(s) out of the market.

搭售 Tying

搭售： 一个企业以单一价格提供两个或多个产品，而不是分开提供。

Tying refers to when a firm offers two (or more) of its products together at a single price, rather than separately.

总结

Summary

❧寡头通过组成卡特尔，象一个垄断者那样行事，以最大化他们的总利润。

Oligopolists maximize their total profits by forming a cartel and acting like a monopolist.

❧如果寡头单独地进行产量决策，结果是比垄断更高的数量和更低的价格。

If oligopolists make decisions about production levels individually, the result is a greater quantity and a lower price than under the monopoly outcome.

总结

Summary

囚徒困境表明，自利的行为阻止人们进行合作，即使合作符合双方各自的利益。

The prisoners' dilemma shows that self-interest can prevent people from maintaining cooperation, even when cooperation is in their mutual self-interest.

囚徒困境的逻辑可以应用于许多场合，包括寡头。

The logic of the prisoners' dilemma applies in many situations, including oligopolies.

总结

Summary

政策制定者运用反托拉斯法来阻止寡头做出妨碍竞争的举动。

Policymakers use the antitrust laws to prevent oligopolies from engaging in behavior that reduces competition.