

第四章 Chapter 4

供给与需求的 市场力量

The Market Forces of Supply and Demand

供给与需求的市场力量

The Market Forces of Supply and Demand

- 供给与需求是经济学家最常用的两个术语。*Supply* and *demand* are the two words that economists use most often.
- 供给与需求是推动市场经济运转的力量所在。*Supply* and *demand* are the forces that make market economies work.
- 现代微观经济学研究供给、需求和市场均衡。
Modern microeconomics is about supply, demand, and market equilibrium.



市场 Markets



一个市场就是由某种商品或服务的买者和卖者组成的群体。

A market is a group of buyers and sellers of a particular good or service.

术语供给和需求指人们的行为……当他们在市场中相互作用时。

The terms supply and demand refer to the behavior of people . . . as they interact with one another in markets.

市场

Markets

买方决定需求。

Buyers determine **demand**.

卖方决定供给。

Sellers determine **supply**.

买方和卖方共同决定市场结果（价格和数量）。

Buyers and seller jointly determine the market outcome (price and quantity).

市场类型：竞争市场

Market Type: *A Competitive Market*

竞争性市场是这样—一个市场……

A **competitive market** is a market. . .

……拥有**众多**买者和卖者

with *many* buyers and sellers.

……不受任何—个人操纵

that is not controlled by any one person.

……买者和卖者所遵循的**价格**被确定在**窄小的范围内**

。 in which
a *narrow range of prices* are established that buyers and
sellers act upon.

竞争：完全竞争与否

Competition:

Perfect and Otherwise

完全竞争 Perfect Competition

ㄲ 物品完全相同。

Products are the same.

ㄲ 买者、卖者如此众多以至于个人无法对价格施加影响。

Numerous buyers and sellers so that each has no influence over price.

ㄲ 买者、卖者都是价格接受者。

Buyers and Sellers are price takers.

竞争：完全竞争与否

Competition: *Perfect and Otherwise*

垄断 Monopoly

只有一个卖者，它控制价格

One seller, and seller controls price

寡头 Oligopoly

少数几个卖者 *Few sellers*

竞争：完全竞争与否

Competition: *Perfect and Otherwise*

㊦ 垄断竞争 **Monopolistic Competition**

㊦ 许多卖者 *Many sellers*

㊦ 存在微小差别的产品

Slightly differentiated products

㊦ 每个卖者都能为自己的产品设定价格

Each seller may set price for its own product

分析竞争市场

Analyzing Competitive Markets

分析竞争市场分为三步：

There are three steps to
analyze a competitive market

📌 需求模型 Demand

📌 供给模型 Supply

📌 供求均衡模型

Demand and Supply, or
Market equilibrium

需求 Demand

需求量是买者愿意而且能够购买的商品数量。

Quantity demanded
is the amount
of a good that buyers are
willing and able
to purchase.

需求量的决定

Determinants of Quantity Demanded

🌀 市场价格 Market price

🌀 消费者收入 Consumer income

🌀 相关商品的价格

Prices of related goods

🌀 嗜好 Tastes

🌀 预期 Expectations

需求定律

Law of Demand

需求定律：其他条件不变，价格上升导致需求量下降。

The **law of demand** states that, other things equal, the quantity demanded of a good falls when the price of the good rises.

需求表

Demand Schedule

需求表通过一个表格显示了商品
价格与需求量之间的关系。

The
demand schedule is a table
that shows the relationship
between the **price** of the good
and the **quantity demanded**.

需求表

Demand Schedule



价格 Price	数量 Quantity
\$0.00	12
0.50	10
1.00	8
1.50	6
2.00	4
2.50	2
3.00	0



需求曲线

Demand Curve

需求曲线：将价格与需求量联系起来的向右下方倾斜的曲线。

The **demand curve** is the downward-sloping line relating price to quantity demanded.

需求曲线

Demand Curve

冰激凌蛋卷的价格
Price of Ice-
Cream Cones

\$3.00

2.50

2.00

1.50

1.00

0.50

0

1

2

3

4

5

6

7

8

9

10

11

12

冰激凌蛋卷的需求数量

Quantity of Ice-
Cream Cones₁₆

价格 Price	数量 Quantity
\$0.00	12
0.50	10
1.00	8
1.50	6
2.00	4
2.50	2
3.00	0

“其他条件不变”

Ceteris Paribus

Ceteris paribus 是一个拉丁习惯用语，意思是除了被研究的变量之外，其余所有变量均假定为恒定不变。字面意义是“其他条件不变（相同）”。 *Ceteris paribus* is a Latin phrase that means all variables other than the ones being studied are assumed to be constant. Literally, *ceteris paribus* means “other things being equal.”

需求曲线向下倾斜是因为，在其他条件不变的情况下，较低的价格意味着较大的需求量 The demand curve slopes downward because, ceteris paribus, lower prices imply a greater quantity demanded!

“其他条件不变”

Ceteris Paribus

在经验研究中，当我们研究感兴趣变量之间因果关系时，其他条件不变是关键。

例子：

物理学上的“可控实验”

医学上的“安慰剂” (Placebo)

经济学上的“自然实验”

“其他条件不变” Ceteris Paribus

例子：以下说法是否正确？

“非典时期，口罩的价格比平时高，同时需求量也比平时大，这违反了需求定律。”

市场需求

Market Demand

📖 市场需求指的是所有个人对某种商品或劳务的需求总和。

Market demand refers to the sum of all individual demands for a particular good or service.

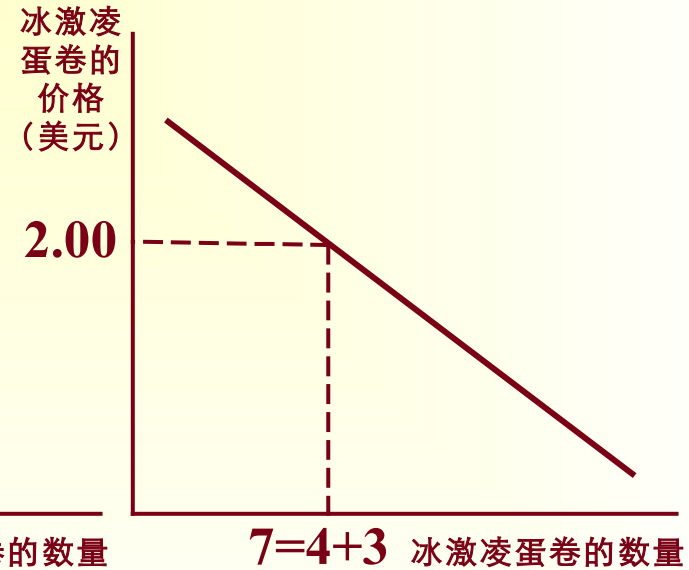
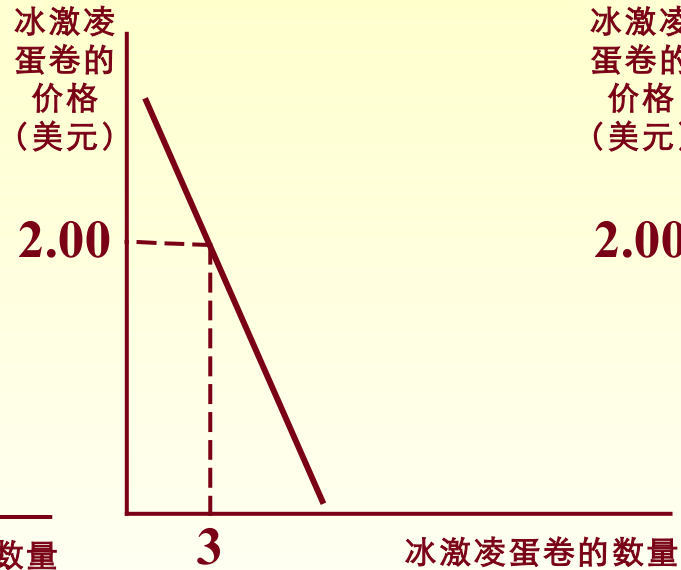
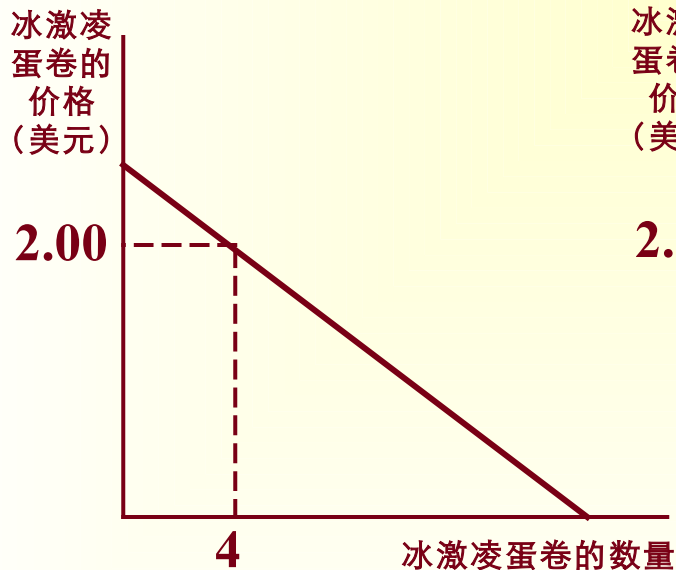
📖 从图形上看，个人需求曲线在水平上加总便得到市场需求曲线。

Graphically, individual demand curves are summed horizontally to obtain the market demand curve.

市场需求

Market Demand

凯瑟琳的需求 + 尼古拉的需求 = 市场需求
Catherine's Demand + Nicholas's demand = Market demand



需求的变化与需求量的变化

Change in Quantity Demanded versus Change in Demand

需求量的变化

Change in Quantity Demanded

由该产品价格变动所引起。

Caused by a change in the *price* of the product.

沿着需求曲线移动。

Movement along the demand curve.

需求量的变动

Changes in Quantity Demanded

每包香烟
的价格
Price of
Cigarettes
per Pack

\$4.00

2.00

0

12

20

D_1

每天抽烟的数量

Number of Cigarettes
Smoked per Day

税收抬高了香烟价格，引致了需求量由 A 到 C 沿着需求曲线运动。 A tax that raises the price of cigarettes results in a movement along the demand curve.

需求量变化与需求变化

Change in Quantity Demanded versus Change in Demand

需求变化 Change in Demand

由该物品价格之外的其他决定因素引起。

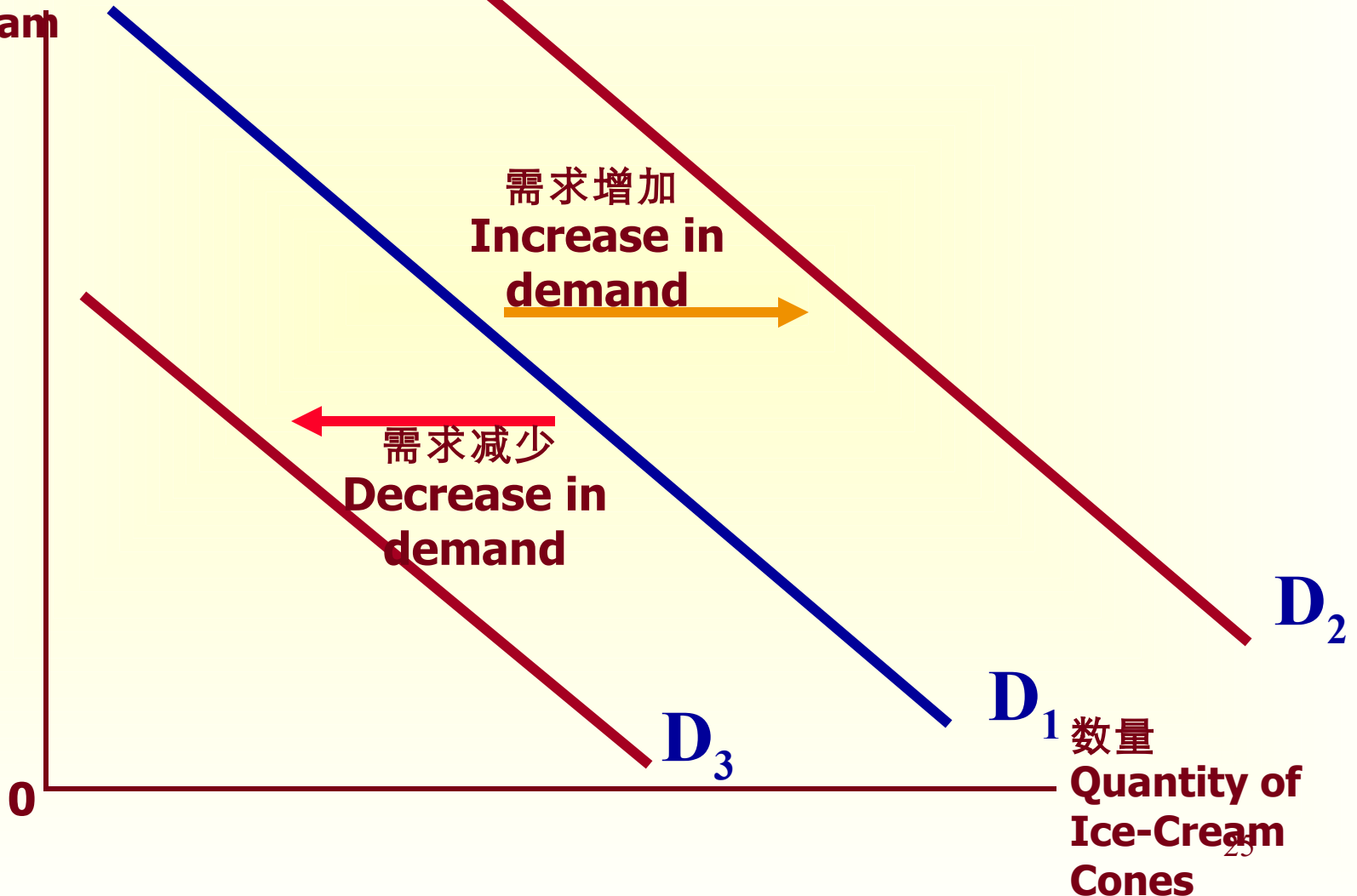
Caused by a change in a determinant other than the price.

需求曲线发生移动，要么左移，要么右移。

A shift in the demand curve, either to the left or right.

需求的变化 Changes in Demand

价格
Price of
Ice-Cream
Cone



消费者收入

Consumer Income

ㄎ 随着收入的增加，对**正常品**的需求会增加。

As income increases the demand for a **normal good** will *increase*.

ㄎ 随着收入的增加，对**劣等品**（**低档品**）的需求会减少。

As income increases the demand for an **inferior good** will *decrease*.

消费者收入：正常品

Consumer Income : Normal Good

Price of Ice-Cream Cone

\$3.00

2.50

2.00

1.50

1.00

0.50

0

1

2

3

4

5

6

7

8

9

10

11

12

需求增加
Increase
in demand

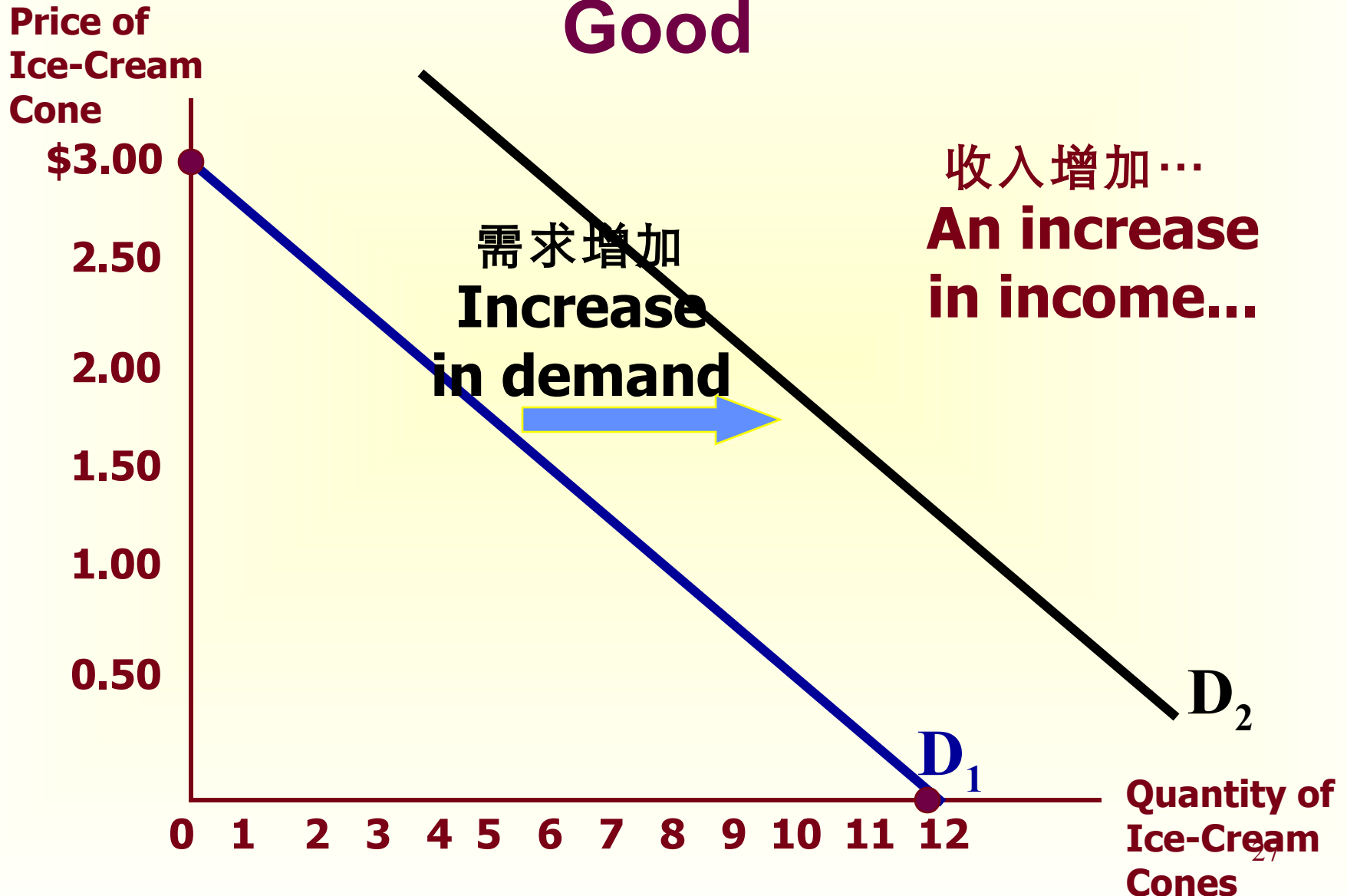
收入增加...

An increase
in income...

D_2

D_1

Quantity of Ice-Cream Cones



消费者收入：劣等品

Consumer Income : Inferior
Good

Price of
Ice-Cream
Cone

\$3.00

2.50

2.00

1.50

1.00

0.50

收入增加...
**An increase
in income...**

需求减少
**Decrease
in demand**



D₂

D₁

0 1 2 3 4 5 6 7 8 9 10 11 12

Quantity of
Ice-Cream
Cones

相关物品的价格

Prices of Related Goods

替代品和互补品

Substitutes & Complements

当一种商品的价格下跌减少了对另一种商品的需求，这两种商品被称为**替代品**。

When a fall in the price of one good reduces the demand for another good, the two goods are called **substitutes**.

当一种商品的价格下跌增加了对另一种商品的需求，这两种商品被称为**互补品**。

When a fall in the price of one good increases the demand for another good, the two goods are called **complements**.

需求量变动与需求变动

Change in Quantity Demanded versus Change in Demand

影响需求量的变量 Variables that Affect Quantity Demanded	这些变量的变动将 A Change in This Variable . . .
价格 Price	沿需求曲线的移动 Represents a movement along the demand curve
收入 Income	移动需求曲线 Shifts the demand curve
相关商品的价格 Prices of Related Goods	移动需求曲线 Shifts the demand curve
嗜好 Tastes	移动需求曲线 Shifts the demand curve
预期 Expectations	移动需求曲线 Shifts the demand curve
购买者人数 Number of Buyers	移动需求曲线 Shifts the demand curve

供给

Supply

供给量是卖者愿意而且能够出售的数量。
。 Quantity supplied is the amount of a good that sellers are willing and able to sell.

决定供给量的因素

Determinants of Quantity Supplied

- 市场价格 Market price
- 投入品价格 Input prices
- 技术 Technology
- 预期 Expectations
- 生产商的数量 Number of producers

供给定律

Law of Supply

供给定律：其他条件不变，价格上升导致供给量增加。

The law of supply states that, other things equal, the quantity supplied of a good rises when the price of the good rises.

供给表

Supply Schedule

供给表显示了商品价格与供给量的关系。
。 The supply schedule is a table that shows the relationship between the **price** of the good and the **quantity supplied**.

供给表

Supply Schedule



价格 Price	数量 Quantity
\$0.00	0
0.50	0
1.00	1
1.50	2
2.00	3
2.50	4
3.00	5



供给曲线

Supply Curve

供给曲线：将价格与供给量联系起来的向上倾斜的曲线。

The **supply curve** is the upward-sloping line relating price to quantity supplied.

供给曲线

Supply Curve

Price of
Ice-Cream
Cone

\$3.00

2.50

2.00

1.50

1.00

0.50

0

1

2

3

4

5

6

7

8

9

10

11

12

Quantity of
Ice-Cream
Cones

Price	Quantity
\$0.00	0
0.50	0
1.00	1
1.50	2
2.00	3
2.50	4
3.00	5

市场供给

Market Supply

📖 市场供给是指某种商品或劳务的所有卖者的供给量之和。

Market supply refers to the sum of all individual supplies for all sellers of a particular good or service.

📖 从图形上看，市场供给曲线是由单个供给曲线在水平上的加总而得到。 Graphically, individual supply curves are summed horizontally to obtain the market supply curve.

供给量变化与供给变化

Change in Quantity Supplied versus Change in Supply

供给量变化 Change in Quantity Supplied

由该商品的市场价格变动引起。

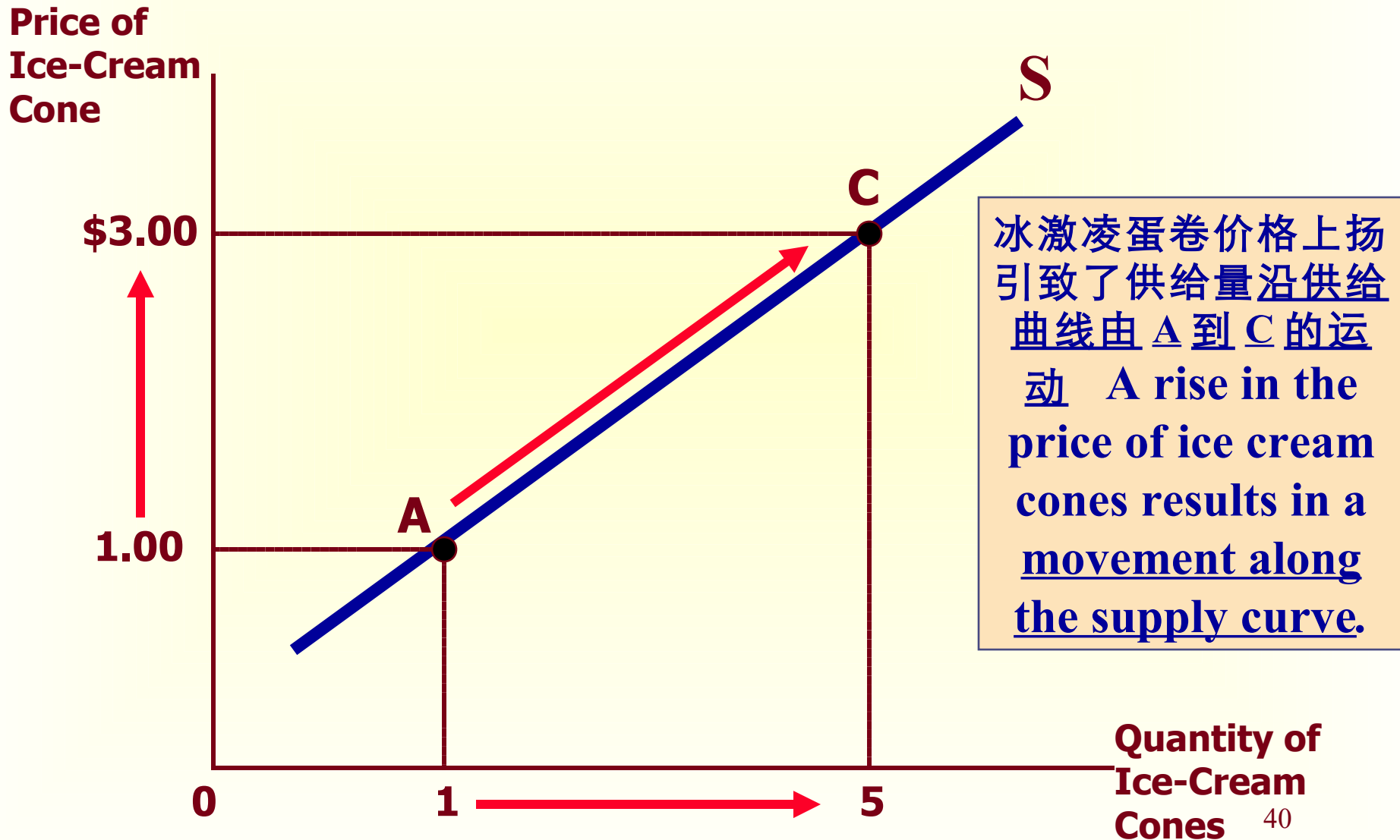
Caused by a change in the market price of the product.

沿着供给曲线移动。

~~Movement along the supply curve.~~

供给量的变动

Change in Quantity Supplied



供给量变化与供给变化

Change in Quantity Supplied versus Change in Supply

供给变动 Change in Supply

由该商品价格之外的其他决定因素引起的变动。

Caused by a change in a determinant other than price.

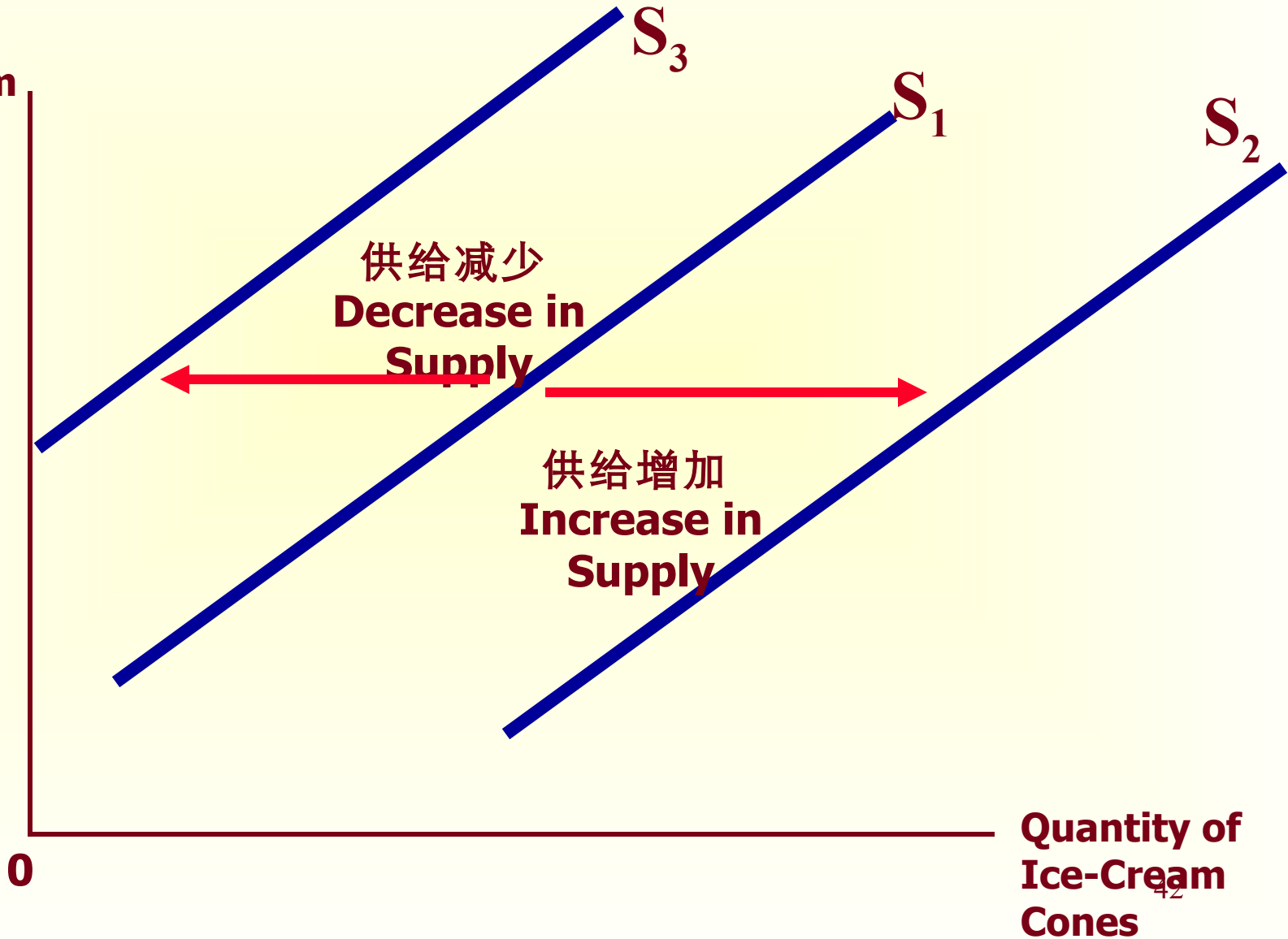
供给曲线移动：左移或右移。

A shift in the supply curve, either to the left or right.

供给变化

Change in Supply

Price of
Ice-Cream
Cone



供给量变动与供给变动

Change in Quantity Supplied versus Change in Supply

影响供给量的变量 Variables that Affect Quantity Supplied	这些变量的变动将 A Change in This Variable . . .
价格 Price	沿供给曲线的移动 Represents a movement along the supplied curve
要素价格 Input Prices	移动供给曲线 Shifts the supply curve
技术 Technologies	移动供给曲线 Shifts the supply curve
预期 Expectations	移动供给曲线 Shifts the supply curve
卖者人数 Number of Sellers	移动供给曲线 Shifts the supply curve

供给与需求的结合

Supply and Demand Together

📖 **供求定律**：在竞争市场上，价格调整使得供给量和需求量平衡。

Law of supply and demand:

In any competitive market, the price of a good adjusts to bring the quantity supplied and quantity demanded for that good into balance.

📖 **均衡**指的就是价格达到使得供给量和需求量相等时的市场状态。

Equilibrium

refers to a situation in which the price has reached the level where quantity supplied equals quantity demanded.

供给与需求的结合

Supply and Demand Together

均衡价格 Equilibrium Price

使得供给和需求平衡的价格。在图形上，对应于供给曲线与需求曲线交点处的价格。

The price that balances supply and demand.
On a graph, it is the price at which the supply and demand curves intersect.

均衡数量 Equilibrium Quantity

使得供给和需求平衡的数量。在图形上，对应于供给曲线和需求曲线交点处的数量。

The quantity that balances supply and demand. On a graph it is the quantity at which the supply and demand curves intersect.

供给与需求的结合

Supply and Demand Together

需求表 Demand Schedule

Price	Quantity
\$0.00	19
0.50	16
1.00	13
1.50	10
2.00	7
2.50	4
3.00	1

供给表 Supply Schedule

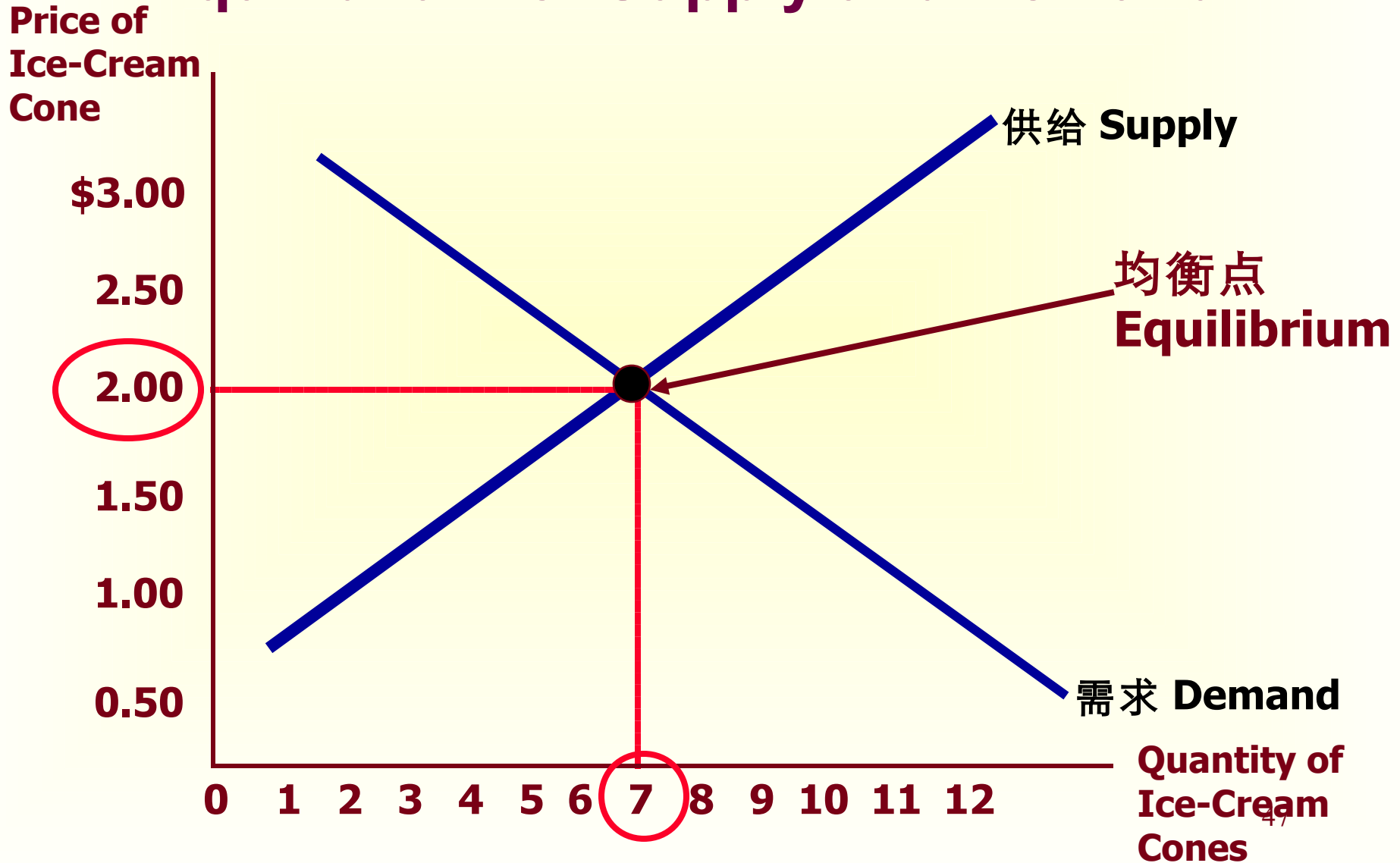
Price	Quantity
\$0.00	0
0.50	0
1.00	1
1.50	4
2.00	7
2.50	10
3.00	13

价格为 \$2 时，需求量等于供给量！

At \$2.00, the quantity demanded is equal to the quantity supplied!

供给与需求的均衡

Equilibrium of Supply and Demand



供给与需求的均衡

Equilibrium of Supply and Demand

- ✧ 在均衡价格下，买者想要和能够购买的物品数量恰好等于卖者想要和能够出售的数量。 At the equilibrium price, the quantity of the good that buyers are willing and able to buy exactly balances the quantity that sellers are willing and able to sell.
- ✧ 均衡价格有时也被称为**市场出清价格**，因为在这种价格下，市场上的每一个人都得到满足。 The equilibrium price is sometimes called the **market-clearing price** because, at the price, everyone in the market has been satisfied.

市场为何趋向均衡（供求定律为何成立）？

Why Market Approaches its Equilibrium?

在一个竞争市场上，物品的交易必然在相同价格下达成（一价法则）。

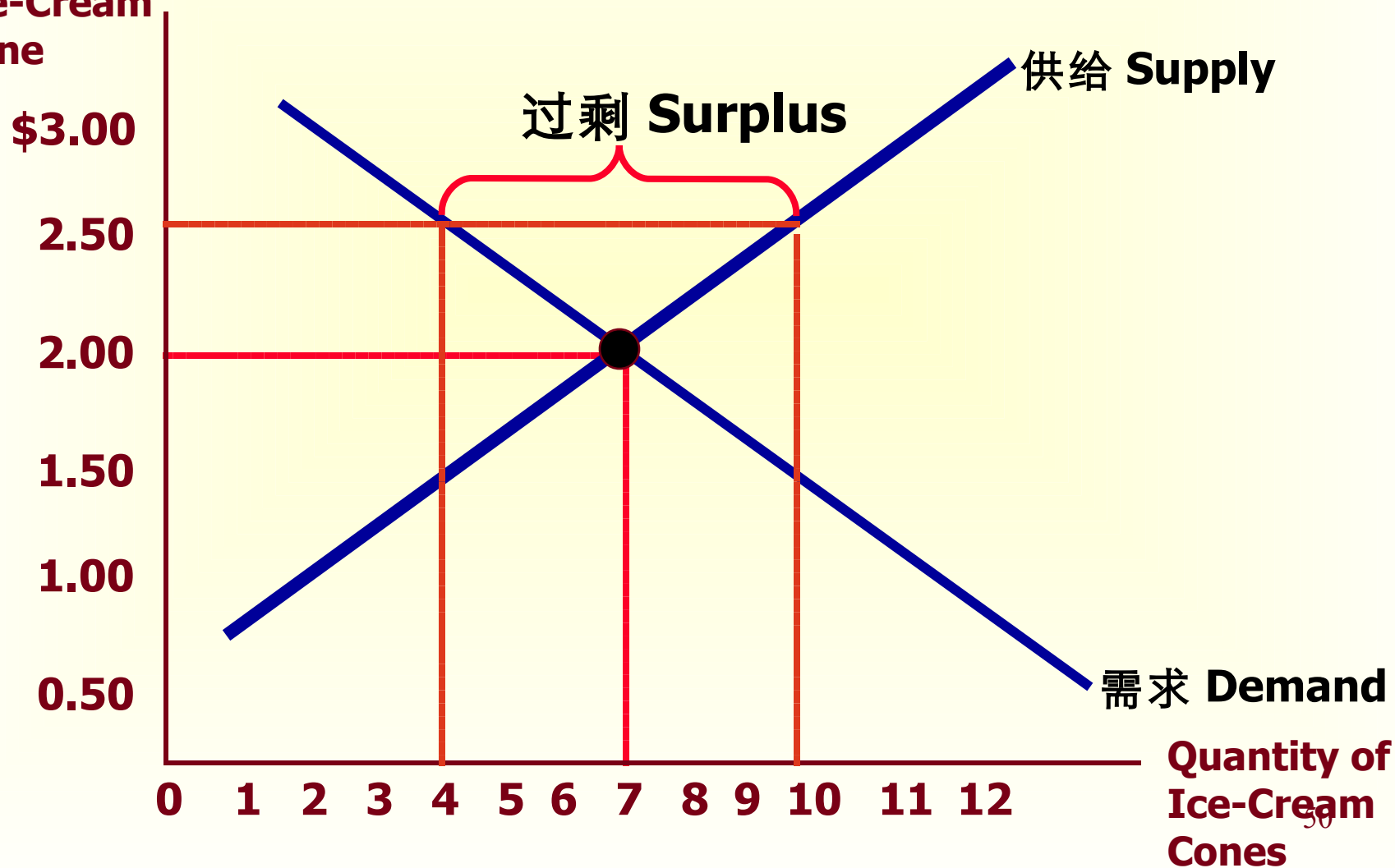
According to the law of one price, a good must be traded at the same price within the market.

买者和卖者的行动会自然地推动市场向其（单一价格的）供求均衡的方向移动。

The actions of buyers and sellers naturally move markets toward the equilibrium of supply and demand (of the single price).

超额供给 Excess Supply

Price of
Ice-Cream
Cone



过剩 Surplus

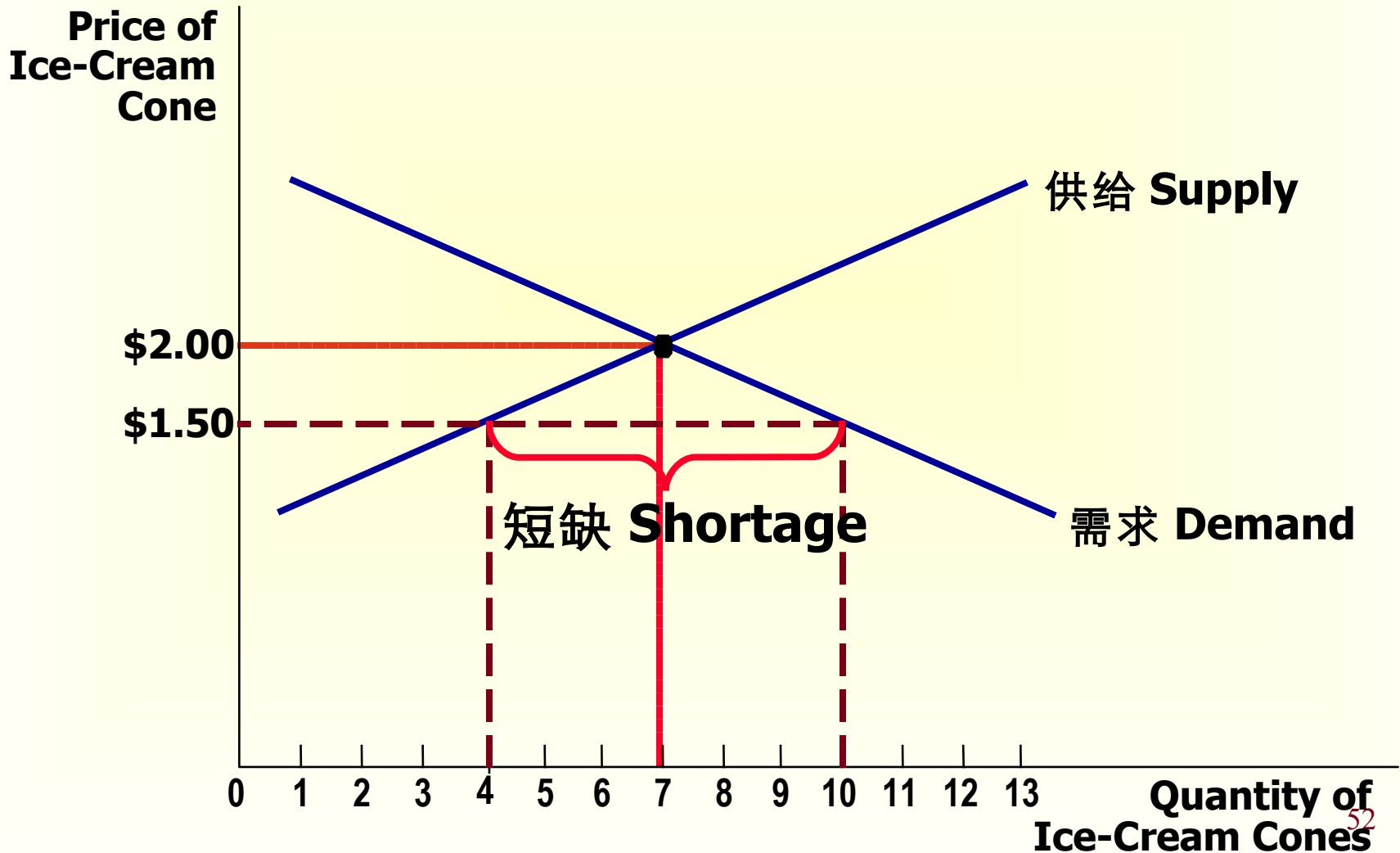
📖 当价格高出均衡价格，供给量超出需求量，便产生了**超额供给**或**过剩**。

When the price is *above* the equilibrium price, the quantity supplied exceeds the quantity demanded. There is **excess supply** or a **surplus**.

📖 供应商将降低价格以增加销售额，由此市场趋向均衡。

Suppliers will lower the price to increase sales, thereby moving toward equilibrium.

超额需求 Excess Demand



短缺 Shortage

当价格低于均衡价格，需求量超出供给量，便产生了超额需求或者短缺。

When the price is *below* the equilibrium price, the quantity demanded exceeds the quantity supplied. There is **excess demand** or a **shortage**.

由于过多的买者抢购过少的物品，供应商将抬高价格，由此市场趋向于均衡。

Suppliers will raise the price due to too many buyers chasing too few goods, thereby moving toward equilibrium.

分析均衡点的变动：比较静态

Analyzing Changes in Equilibrium : Comparative Statics

三个步骤 Three steps:

(1) 确定该事件是移动供给曲线还是需求曲线（或者两者都移动）。

Decide whether the event shifts the supply or demand curve (or both).

(2) 确定曲线是左移还是右移。

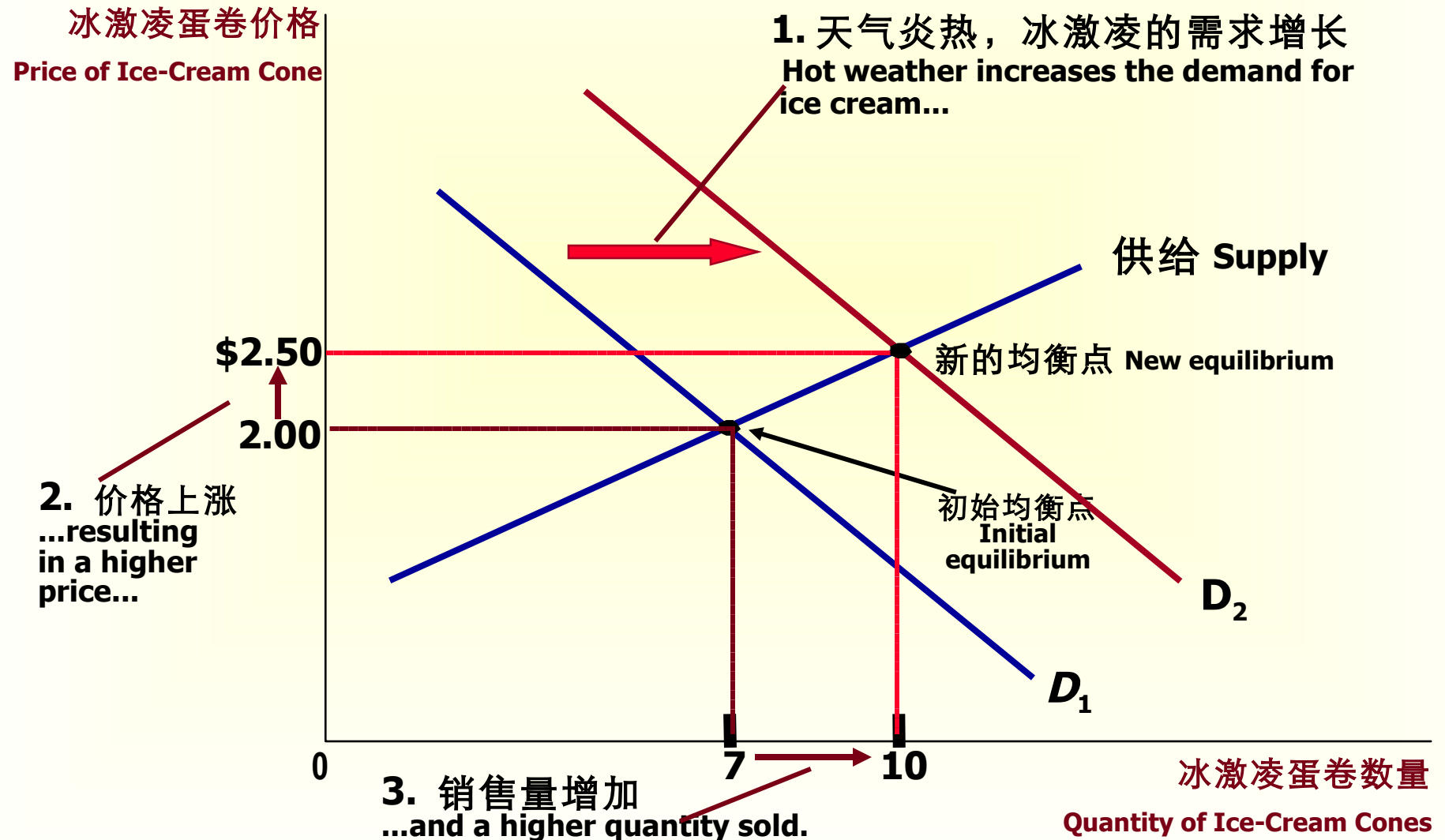
Decide whether the curve(s) shift(s) to the left or to the right.

(3) 用供求图说明这种移动如何改变均衡价格和均衡数量。

Examine how the shift affects equilibrium price and quantity.

需求的增长如何影响均衡

How an Increase in Demand Affects the Equilibrium



曲线移动与沿曲线移动

Shifts in Curves versus Movements along Curves

🌀 供给曲线移动被称之为 **供给变动**

A shift in the supply curve is called a *change in supply*.

🌀 沿一固定供给曲线移动被称之为 **供给量变动**

A movement along a fixed supply curve is called a *change in quantity supplied*.

🌀 需求曲线移动被称之为 **需求变动**

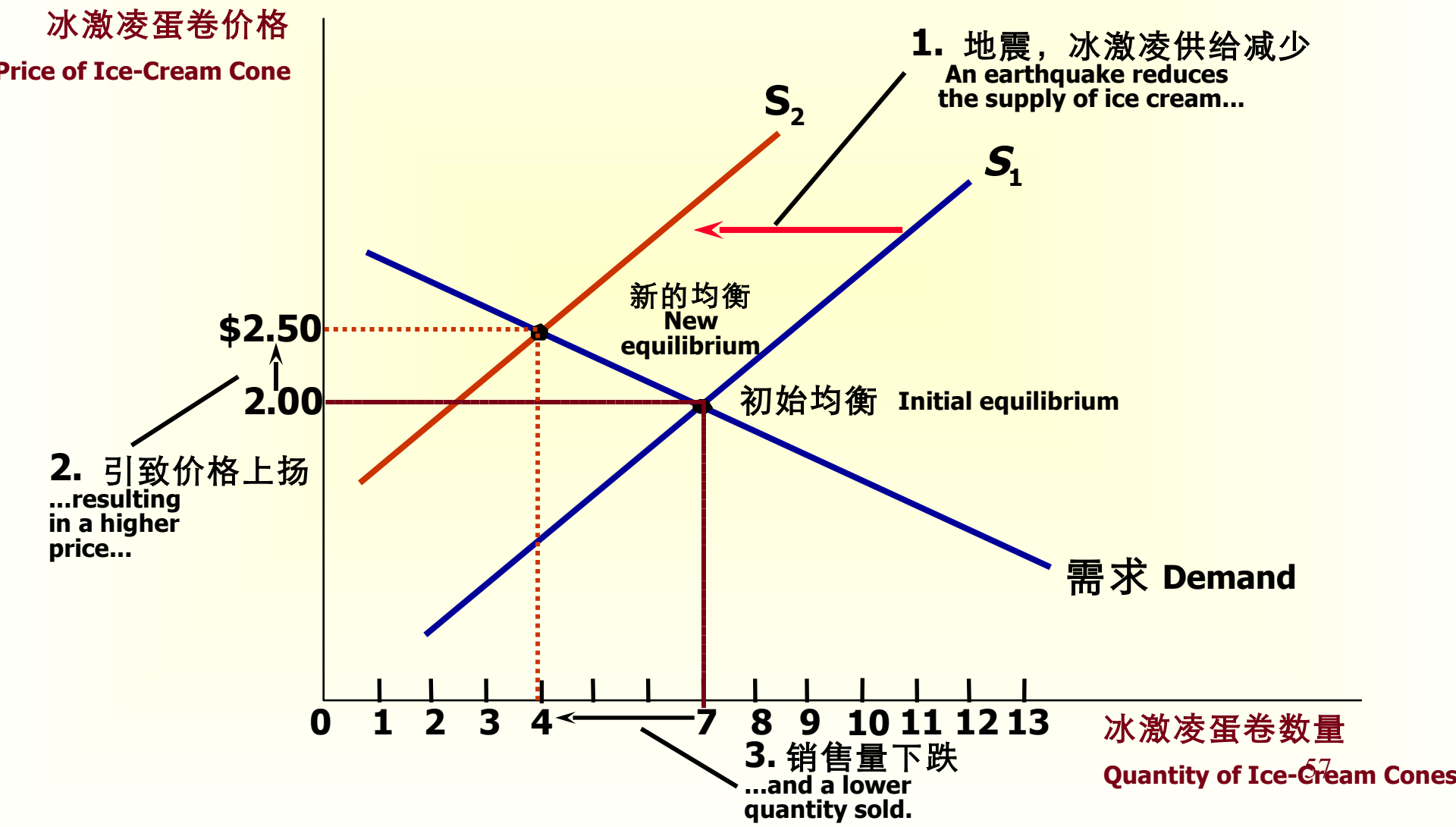
A shift in the demand curve is called a *change in demand*.

🌀 沿一固定需求曲线移动被称之为 **需求量变动**

A movement along a fixed demand curve is called a *change in quantity demanded*.

供给减少如何影响均衡

How a Decrease in Supply Affects the Equilibrium



当供给或需求发生移动，价格和数量情况如何

What Happens to Price and Quantity When Supply or Demand Shifts?

	No Change In Supply	An Increase In Supply	A Decrease In Supply
No Change In Demand	P same Q same	P down Q up	P up Q down
An Increase In Demand	P up Q up	P ambiguous Q up	P up Q ambiguous
A Decrease In Demand	P down Q down	P down Q ambiguous	P ambiguous Q down

市场均衡价格与均衡数量
之间一定是正相关或负相关吗？

当供给或需求发生移动，价格和数量情况如何

What Happens to Price and Quantity When Supply or Demand Shifts?

- ❧ 当市场上仅有供给发生变动（供给曲线移动），我们观察到的均衡价格与数量的关系就是负相关（反映需求曲线）。
- ❧ 当市场上仅有需求发生变动（需求曲线移动），我们观察到的均衡价格与数量的关系就是正相关（反映供给曲线）。

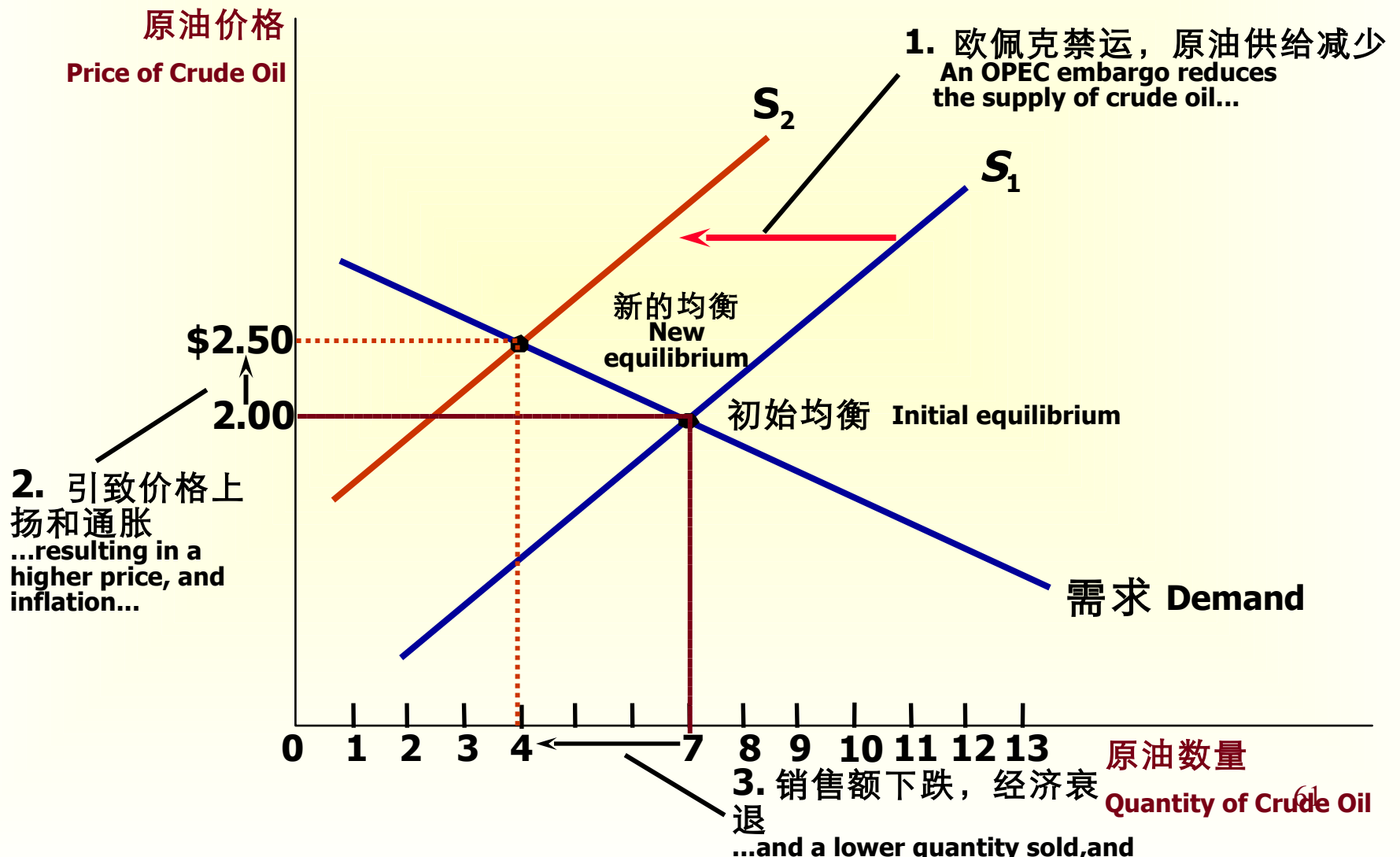
例子：石油与全球经济

An Example: Oil and the Global Economy

- 在过去三年间（2002-2005年），原油价格上涨了两倍。
The price of crude oil has more than tripled within the past three years (2002-2005).
- 其幅度类似于1973-74、1978-80和1989-90年。而这三个时期无一例外地出现了世界范围的经济衰退和通货膨胀加剧。
This is similar in scale to the price jumps of 1973-74, 1978-80, 1989-90, all of which were followed by worldwide recession and rising inflation.
- 而今天，全球GDP增长远高于其自然趋势，而通胀维持在低水平
Today, though, global GDP growth is well above trend, while inflation remains low.
- 为何此时的世界经济能够平安无恙？
Why has the world economy fared so comfortably this time?

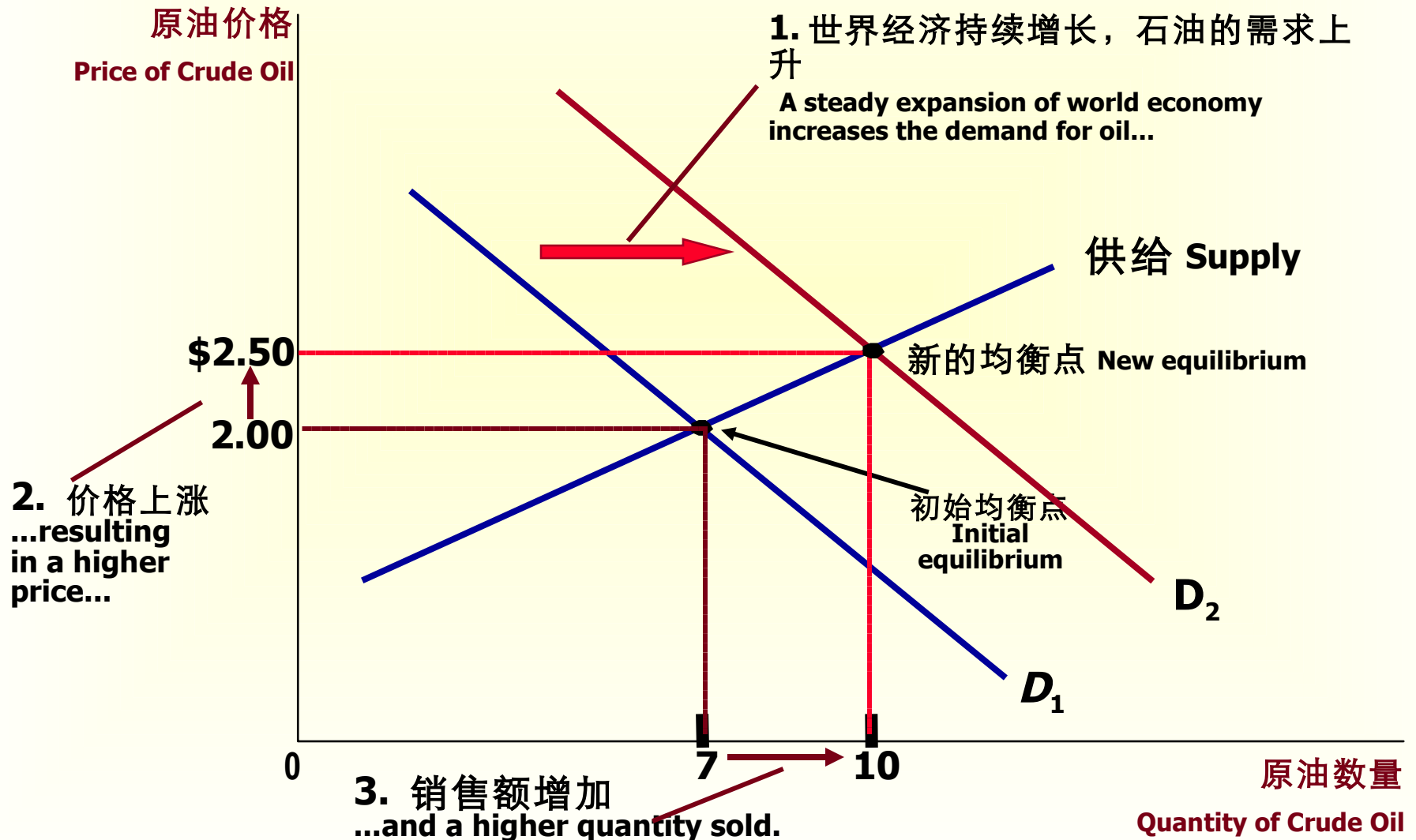
石油与全球经济： 70 年代

Oil and the Global Economy: 1970s



石油与全球经济：现在

Oil and the Global Economy: Now



例子：石油与全球经济

An Example: Oil and the Global Economy

过去的经验法则是基于**供给**冲击的，因而不适用于由**需求**上升驱动的价格上升。

The old rules of thumb based on *supply* shocks do not work for price increases driven by rising *demand*.

如果石油价格上升是由于供给不足，则一定会引起GDP增长下降。

If oil price rise because of a shortfall in supply, they will unambiguously *cause* GDP growth to fall.

相反的，如果较高的石油价格反映的是强劲的需求，那么它就是健康的全球增长的结果（反向因果关系）。

However, if higher oil prices instead reflect strong demand, then they are the *product* of healthy

当供给或需求发生移动，价格和数量情况如何

What Happens to Price and Quantity When Supply or Demand Shifts?

📖 以下说法是否正确？

📖 “住宅价格升高了，但销售量依然在增加。这令人费解（因为违反了需求定律）。”

📖 “政府的支农政策（例如，让农民便宜地购买种子和化肥）导致了粮食增产，这又导致粮食价格下降，从而使得粮食产量减少，而这又使得粮食价格上升。因此，无法确定粮食市场最终的产量与价格的变化方向。”

需求模型、供给模型与市场模型： 内生变量与外生变量

经济模型	研究的问题	外生变量（因）	内生变量（果）
需求模型	消费者（买者）行为	价格，收入，嗜好等	需求量
供给模型	企业（卖者）行为	价格，技术等	供给量
供求模型	市场整体的行为	消费者：收入，偏好等 企业：技术等	均衡价格，均衡数量 (价格不再外生)

结论：价格如何配置资源

Conclusion : How Prices Allocate Resources

✎ 在任何一种经济制度中，必须把稀缺资源配置到不可兼得的各种用途当中。

In any economic system, scarce resources have to be allocated among competing uses.

✎ 市场经济利用供给和需求的力量来实现这一目的。
。 Market economies harness the forces of supply and demand to serve that end.

✎ 供给和需求共同决定了经济中许多不同物品与劳务的价格；价格又是指导资源配置的 **信号**。

Supply and demand together determine the prices of the economy's many different goods and services; prices in turn are the **signals** that guide the allocation of resources.

总结

Summary

📖 经济学家们使用供求模型来分析竞争性市场。
Economists use the model of supply and demand to analyze competitive markets.

📖 需求曲线显示了一种物品的需求量如何依赖于价格。

The demand curve shows how the quantity demanded of a good depends upon the price.

总结

Summary

📖 根据需求定律，当一种商品的价格上涨时，需求数量下跌。

According to the law of demand, as the price of a good rises, the quantity demanded falls.

📖 除了价格外，决定需求量的因素还包括收入、税收、预期以及互补品和替代品的价格。

In addition to price, other determinants of quantity demanded include income, tastes, expectations, and the prices of complements and substitutes.

总结

Summary

📖 供给曲线显示了一种物品的供给量如何依赖于价格。

The supply curve shows how the quantity supplied of a good supplied depends upon the price.

📖 根据供给定律，随着一种商品的价格上涨，供给的数量增加。

According to the law of supply, as the price of a good rises, the quantity supplied rises.

总结

Summary

除了价格，决定供给量的其他因素还包括投入要素价格、技术和预期。

In addition to price, other determinants of quantity supplied include input prices, technology, and expectations.

市场均衡决定于供给曲线、需求曲线的交点。 Market equilibrium is determined by the intersection of the supply and demand curves.

总结

Summary

- 🌀 供给和需求共同决定经济中商品和服务的价格 Supply and demand together determine the prices of the economy's goods and services.
- 🌀 在市场经济中，价格是引导资源配置的信号。 In market economies, prices are the signals that guide the allocation of resources.