PART 2

How Markets Function

PRINCIPLES OF

Microeconomics

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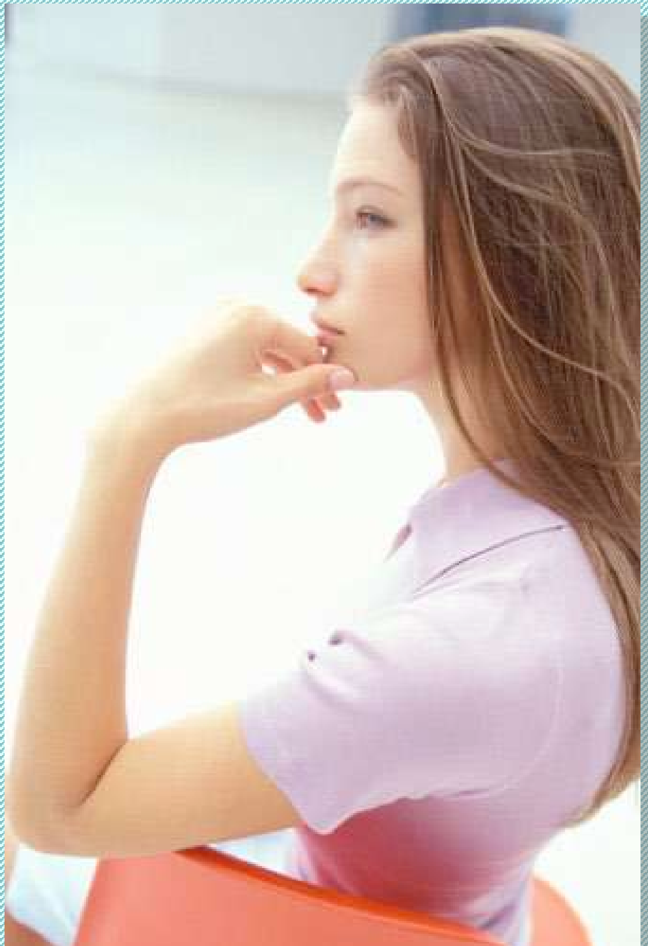
Chapter 6: Supply and Demand in Markets



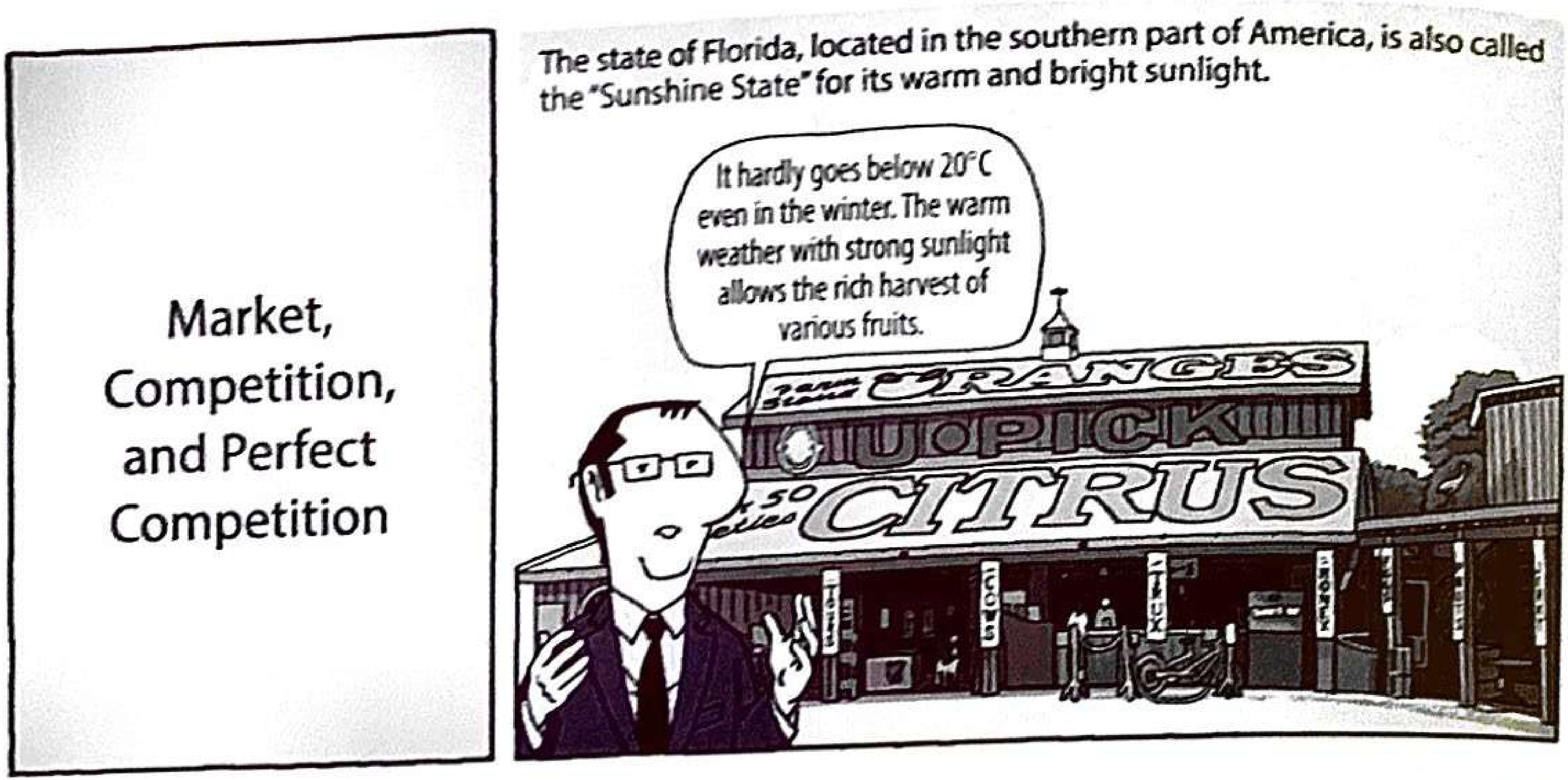
Chapter 6: Supply and Demand in Markets

- **Supply and demand are the two terms most frequently used by economists.**
- **Supply and demand are the driving forces in a market economy, determining the quantity produced and sale price of every good.**
- **Therefore, to understand how an event or policy will affect the economy, we must consider its impact on both supply and demand.**

Chapter 6: Supply and Demand in Markets

- **Markets and Competition**
- Demand
- Supply
- The Combination of Supply and Demand

Market, competition, and perfect competition



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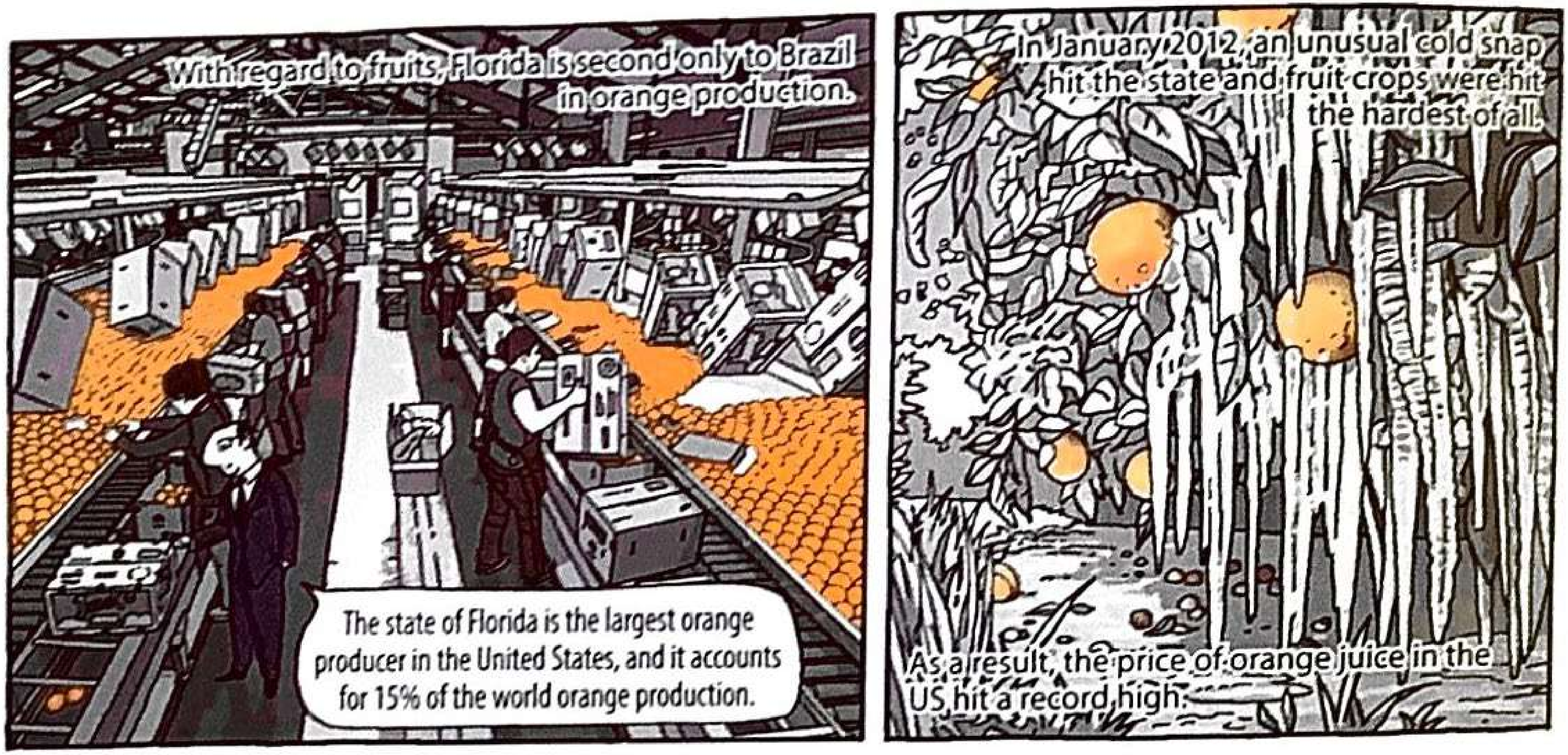
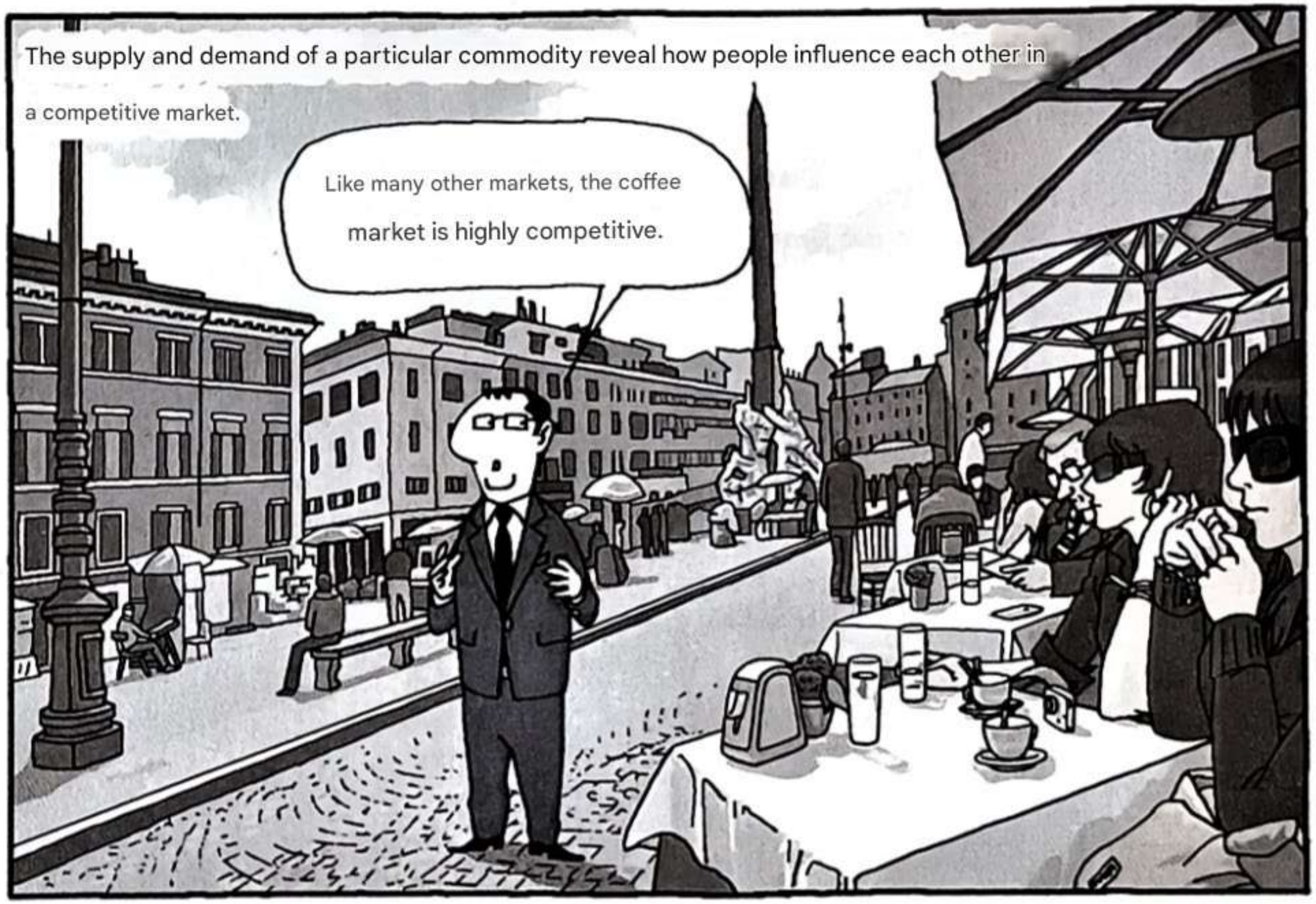


The example of oranges is a perfect illustration of how markets work.

Market, competition, and perfect competition



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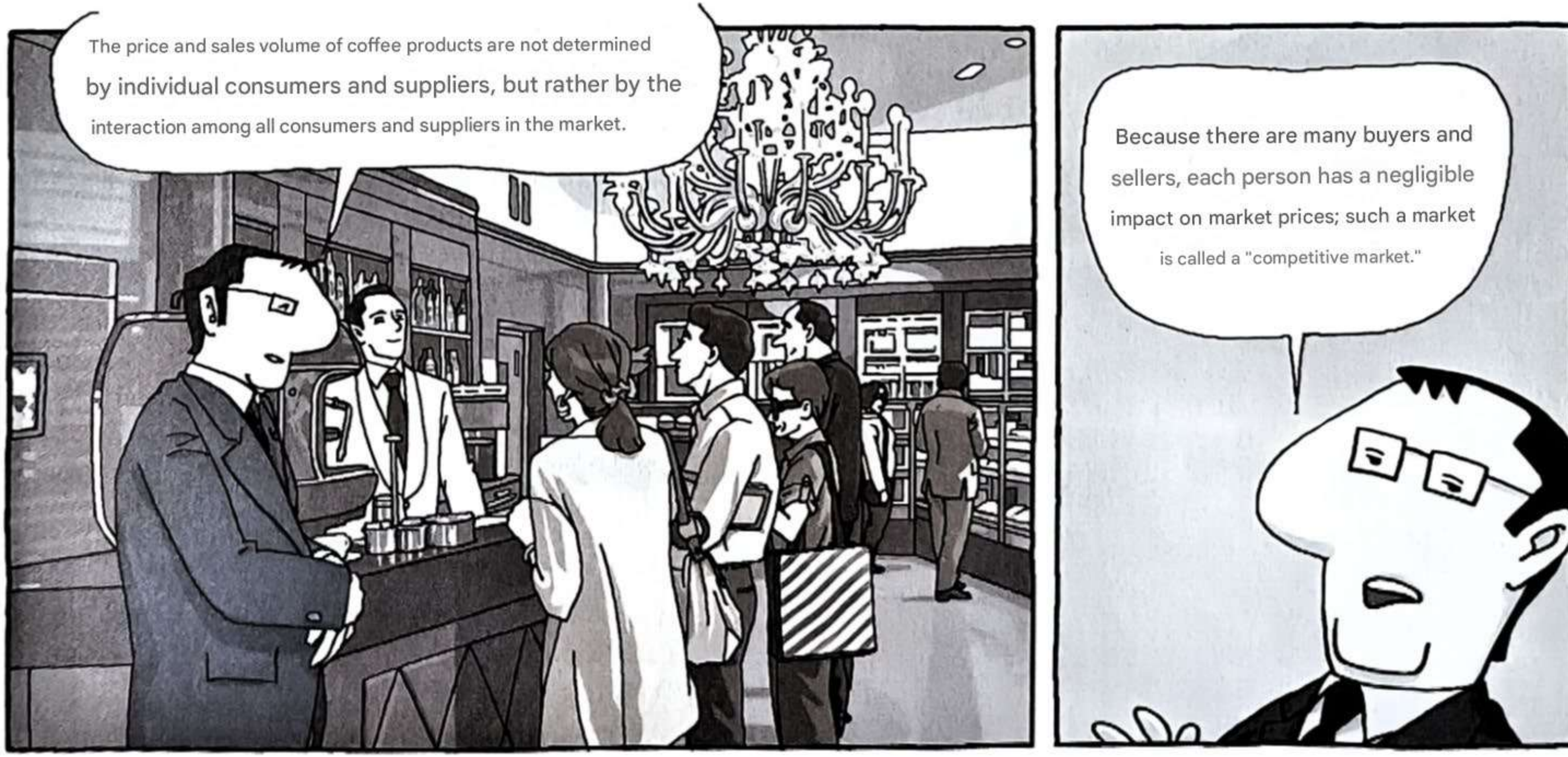

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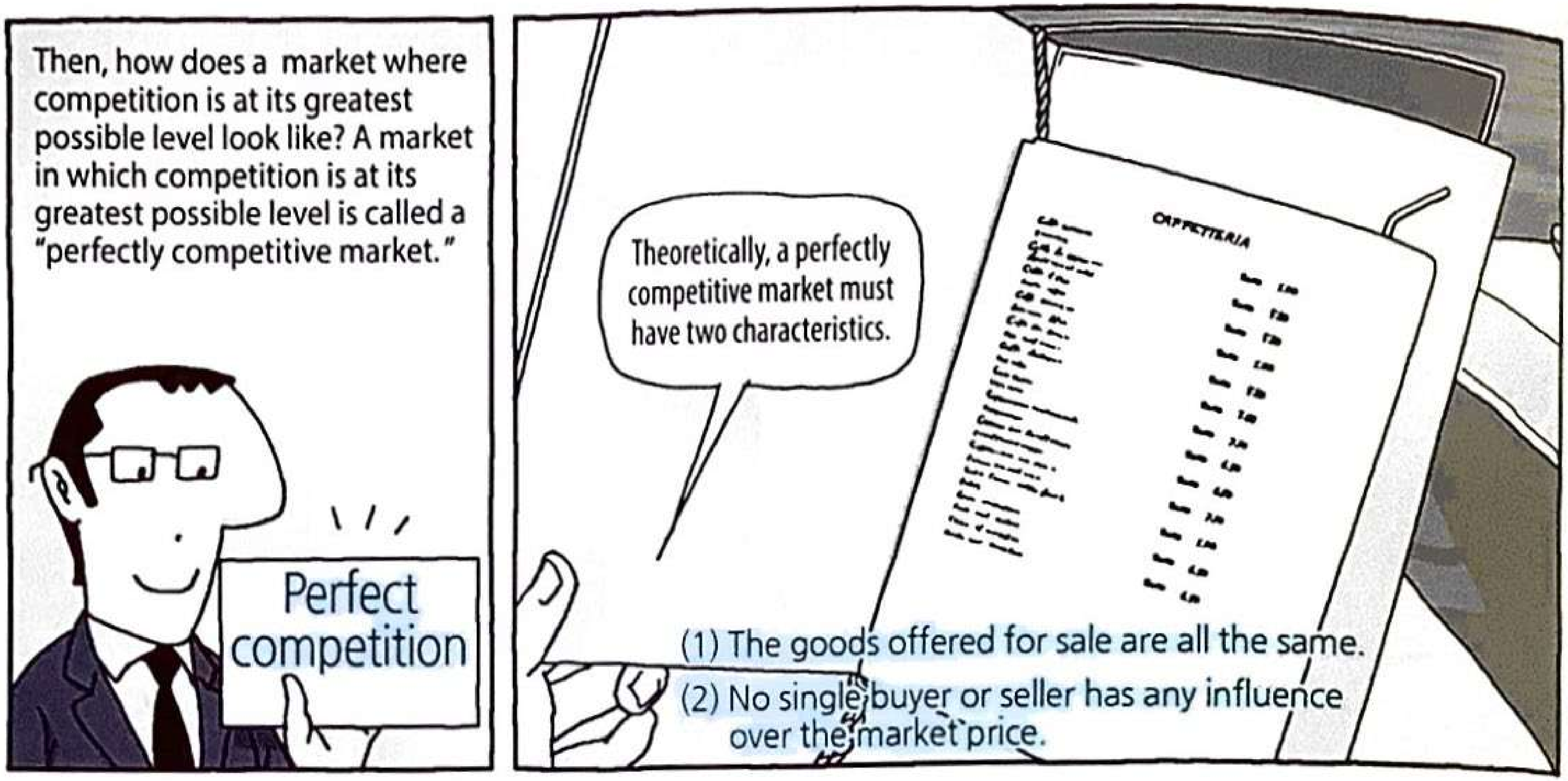

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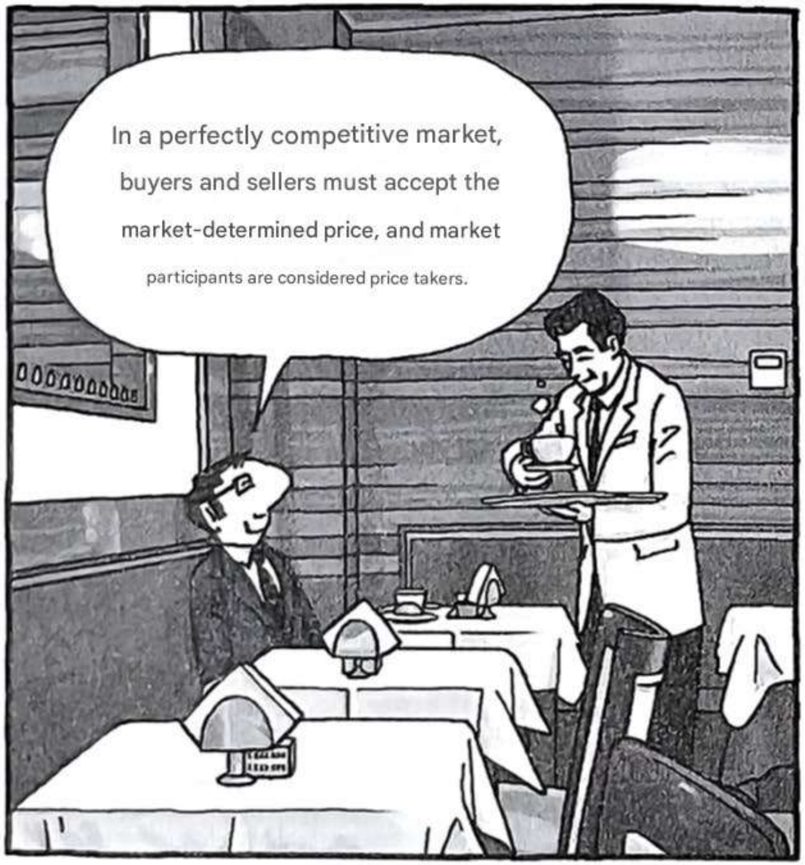
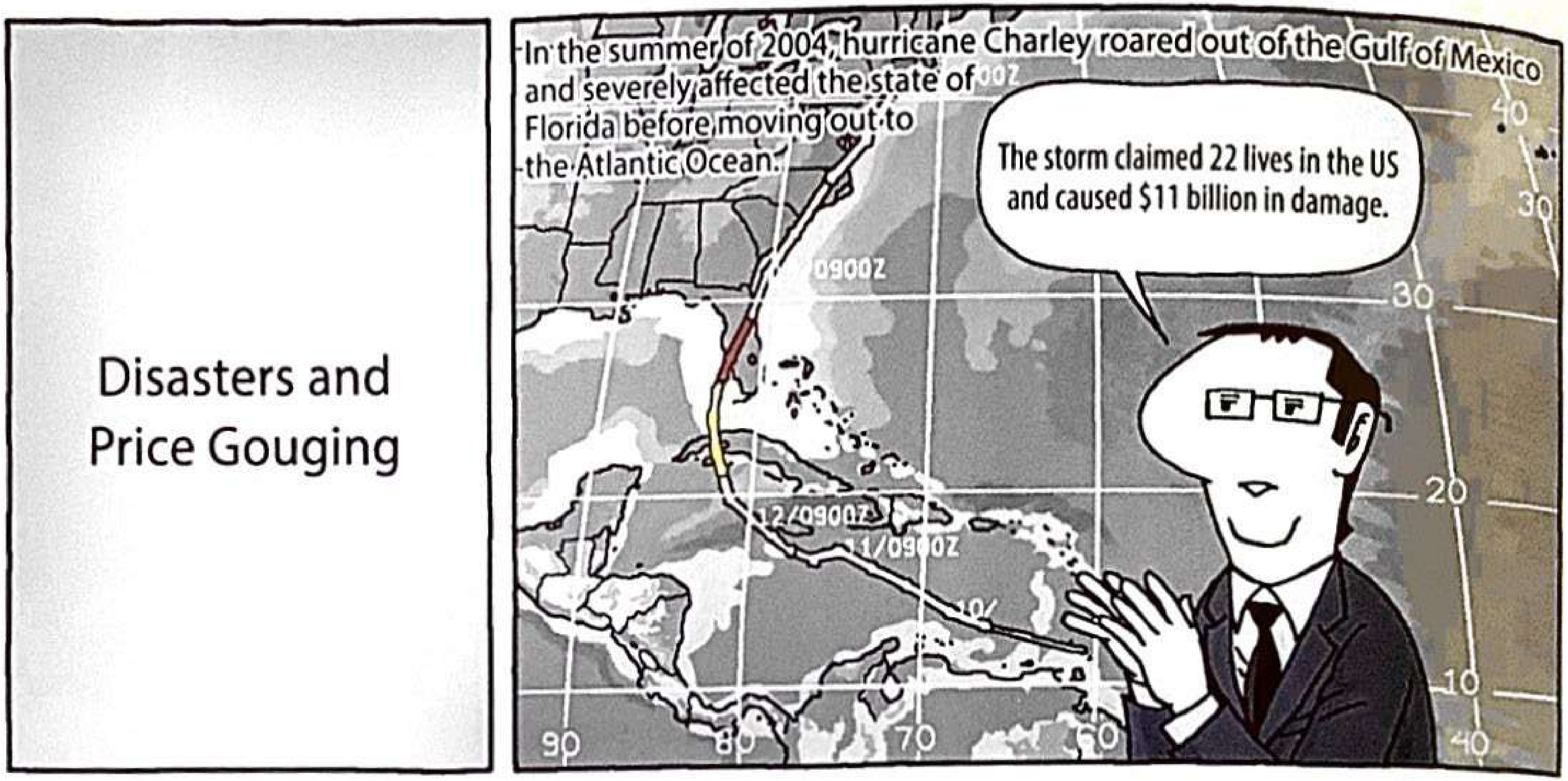
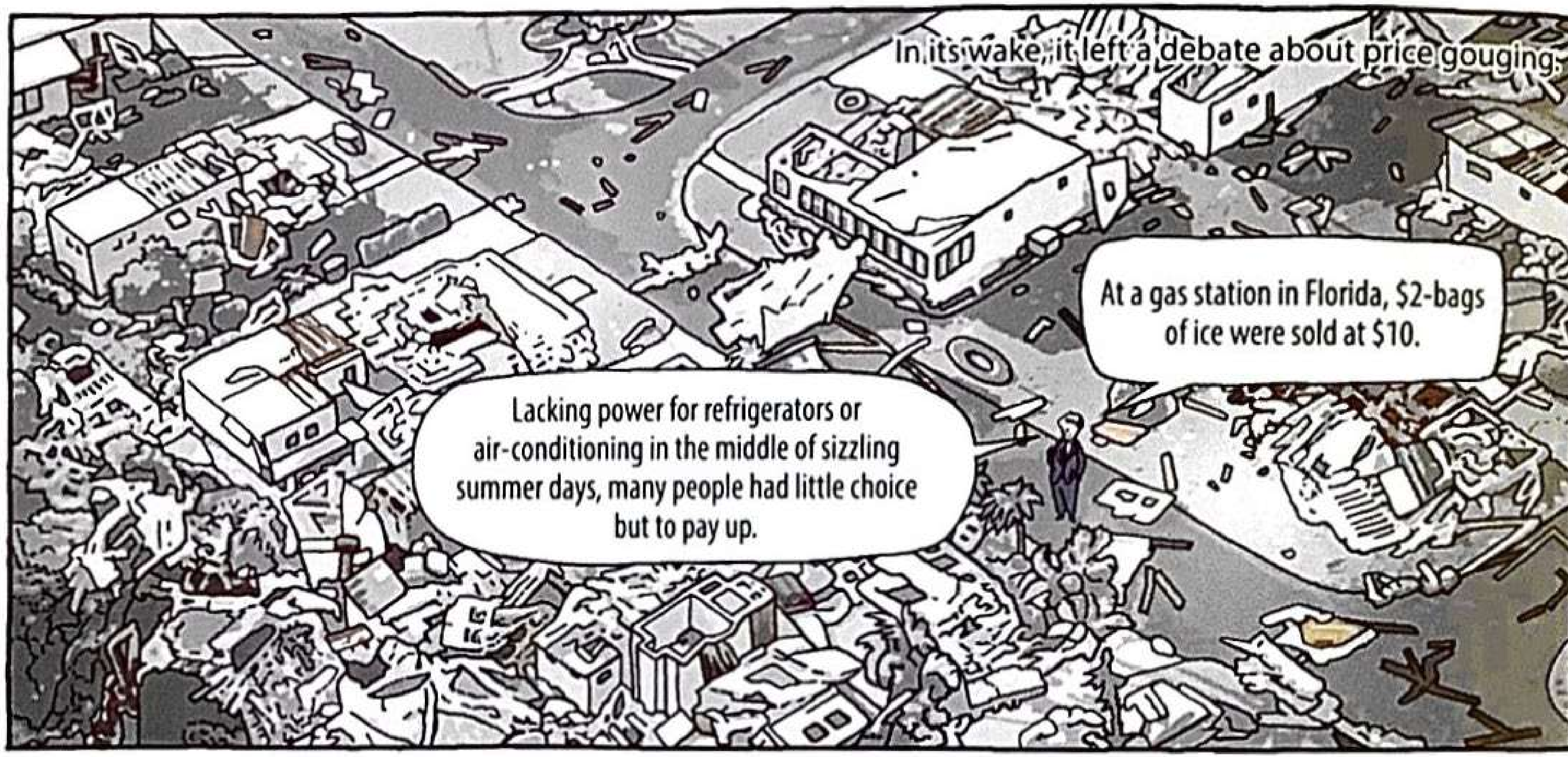


Market, competition, and perfect competition

Disasters and Price Gouging



Disasters and Price Gouging



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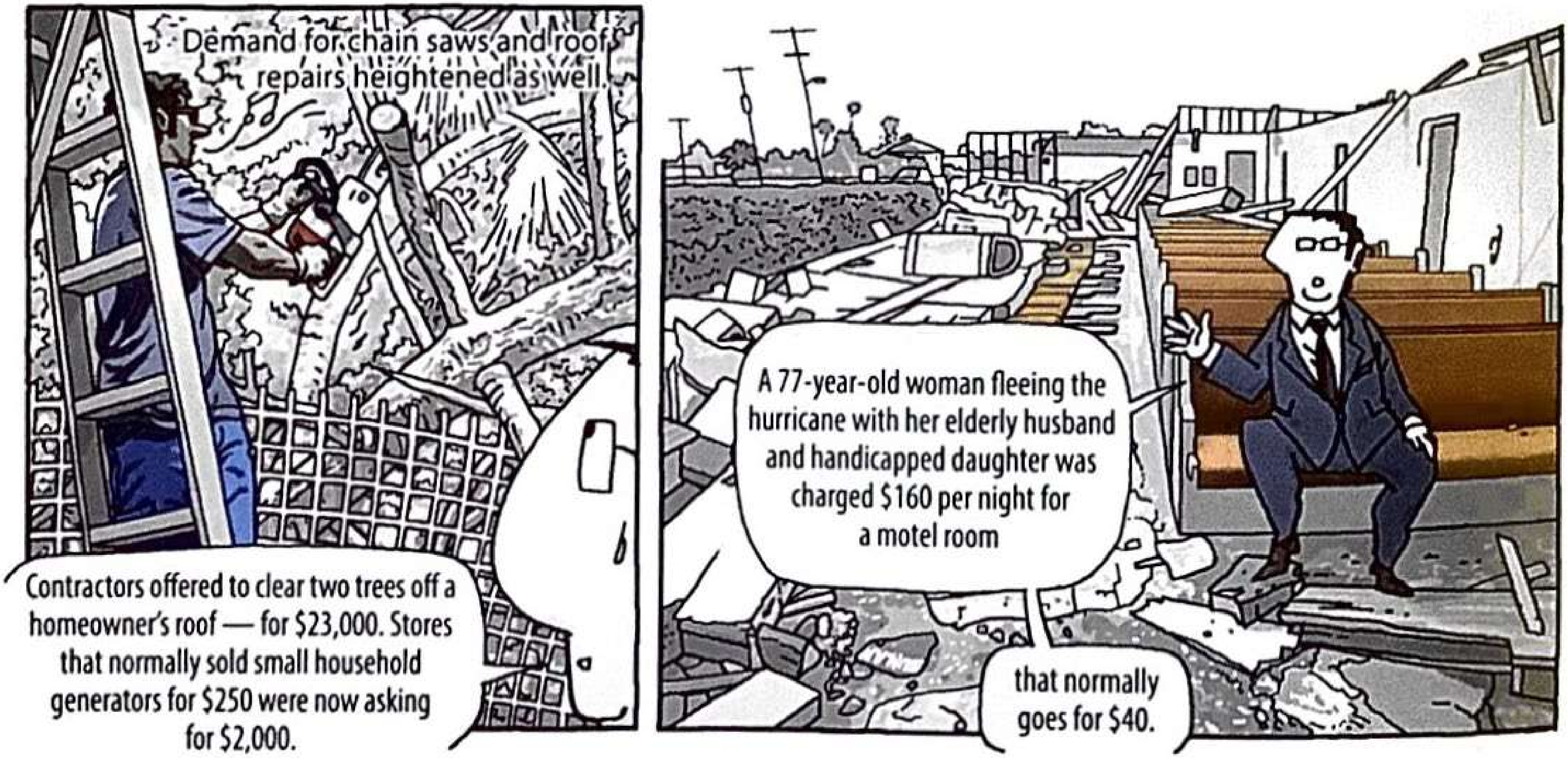


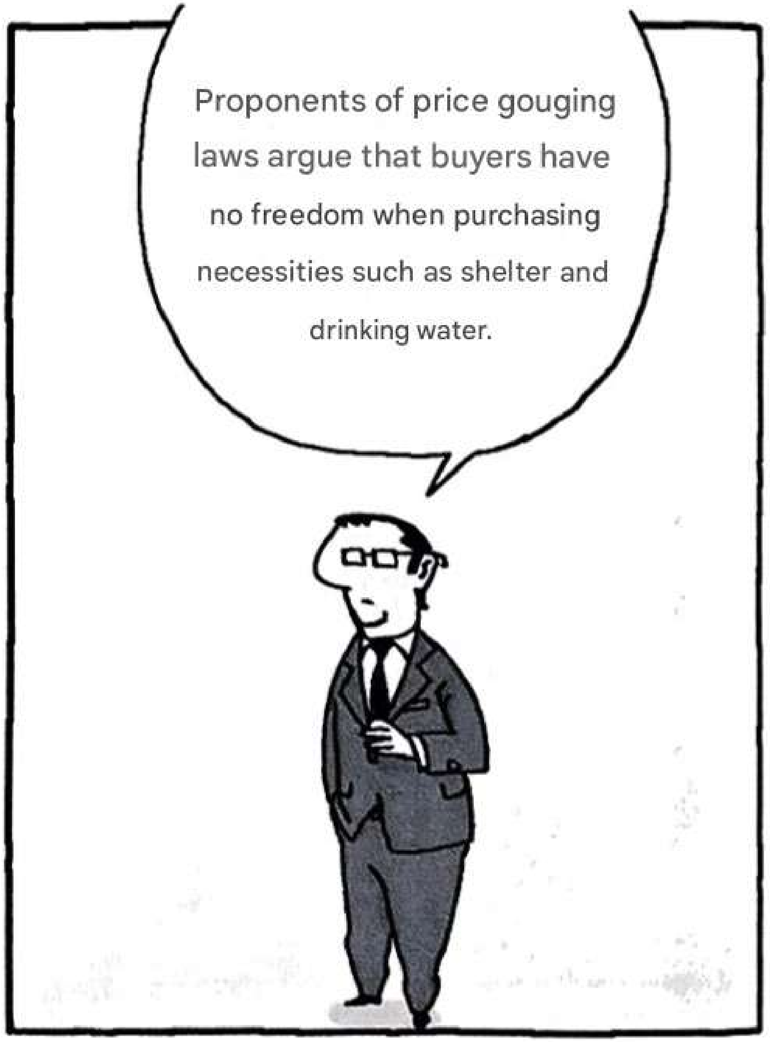
Disasters and Price Gouging

Disasters and Price Gouging

From an economic perspective, market prices are determined by supply and demand, and there is no such thing as a "fair price".

Disasters and Price Gouging

Disasters and Price Gouging



Disasters and Price Gouging

SUMMARY

- A competitive market is one with many buyers and sellers, where each individual has a negligible impact on the market price.
  - Like most markets in the economy, the ice cream market is highly competitive. Each ice cream seller has limited control over the price because other sellers are offering similar products.
  - Sellers have little reason to set prices below the prevailing market price, and if one charges more, buyers will purchase from elsewhere. Similarly, no single ice cream buyer can influence the price of ice cream, as each buyer purchases only a small quantity relative to the size of the market.

SUMMARY

- A perfectly competitive market must have two characteristics:
  - The goods available for sale are identical.
  - No single buyer or seller can influence the market price.
  - Because buyers and sellers in a perfectly competitive market must accept the price determined by the market, they are referred to as price takers. At the market price, buyers can purchase all they want, and sellers can sell all they wish.
- In some markets, the assumption of perfect competition holds completely, but this is relatively rare. Some markets have only one seller, and this seller determines the price; such a seller is called a monopolist. Other markets fall between the two extremes of perfect competition and monopoly.

SUMMARY

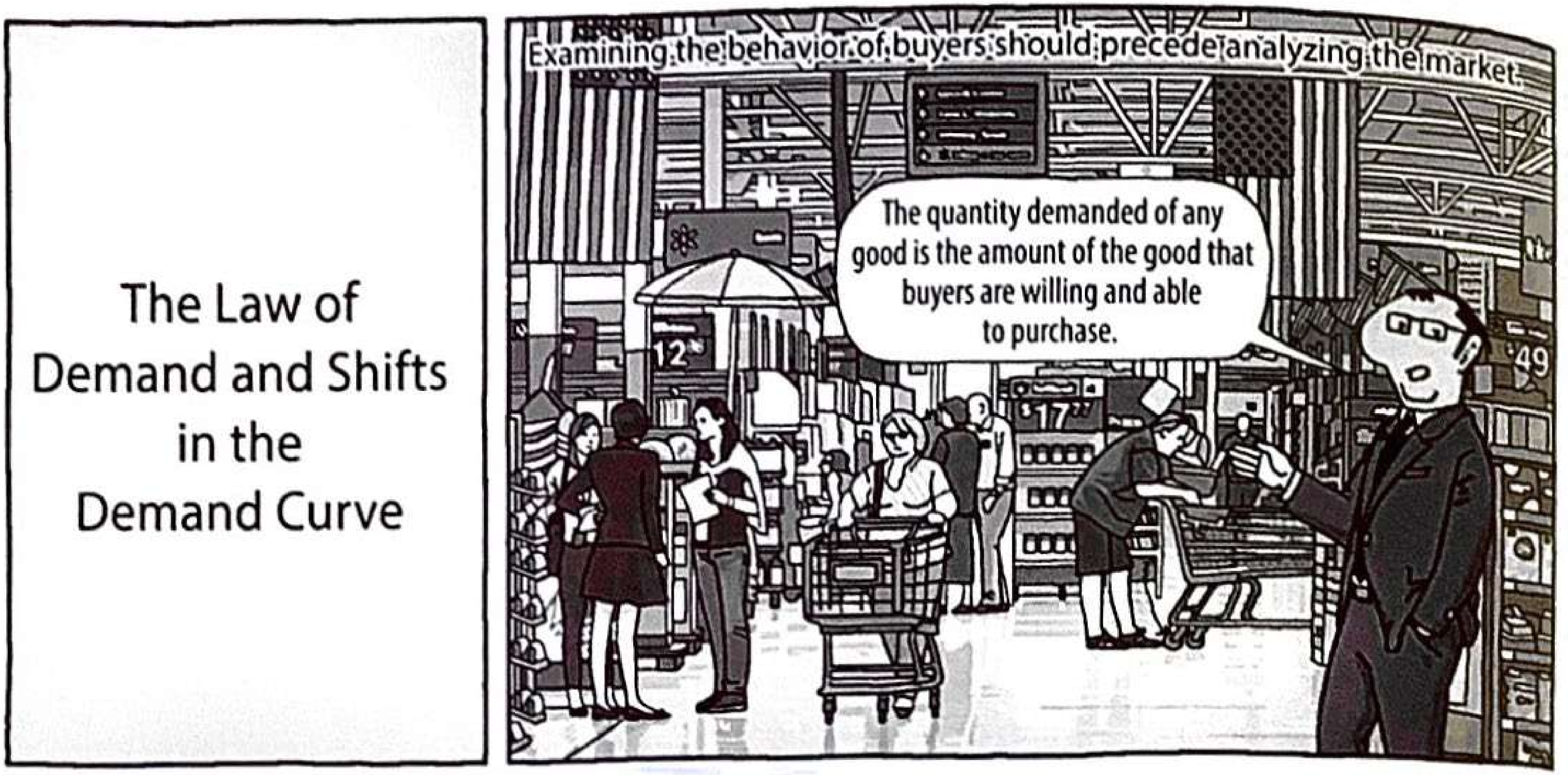
- Although the types of markets we observe in the world are diverse, the assumption of perfect competition serves as a useful simplification. Therefore, our analysis of how markets function naturally begins from this starting point.

- Perfectly competitive markets are the easiest to analyze because every market participant accepts the price determined by market conditions. Moreover, since most markets possess some degree of competition, many of the insights we gain from studying supply and demand under perfect competition also apply to more complex markets.

Chapter 6: Supply and Demand in Markets

- Markets and Competition
- **Demand**
- Supply
- The Combination of Supply and Demand

The Law of Demand and the Shift of the Demand Curve

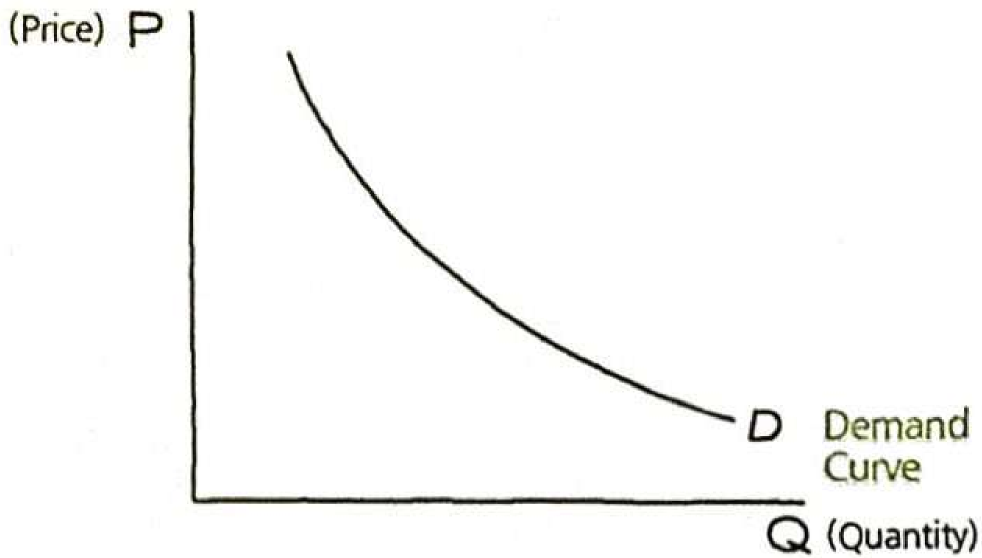


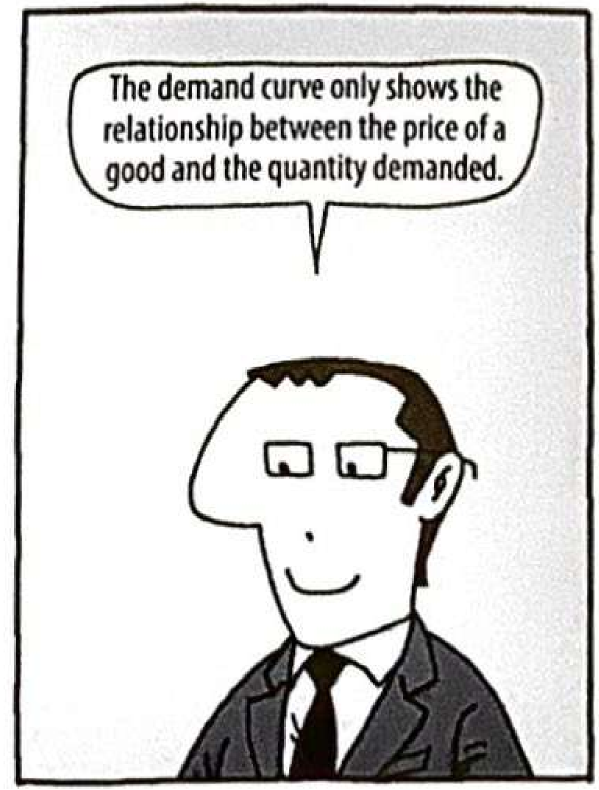
The Law of Demand and the Shift of the Demand Curve

The Law of Demand and the Shift of the Demand Curve

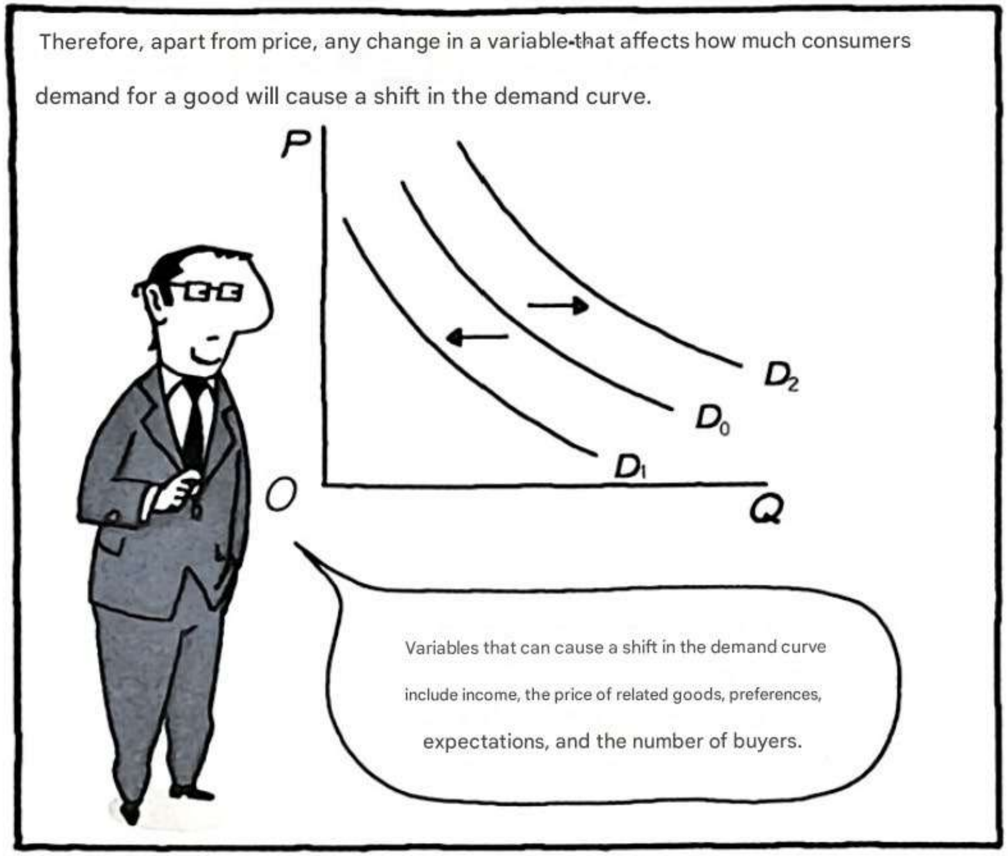
The Law of Demand and the Shift of the Demand Curve

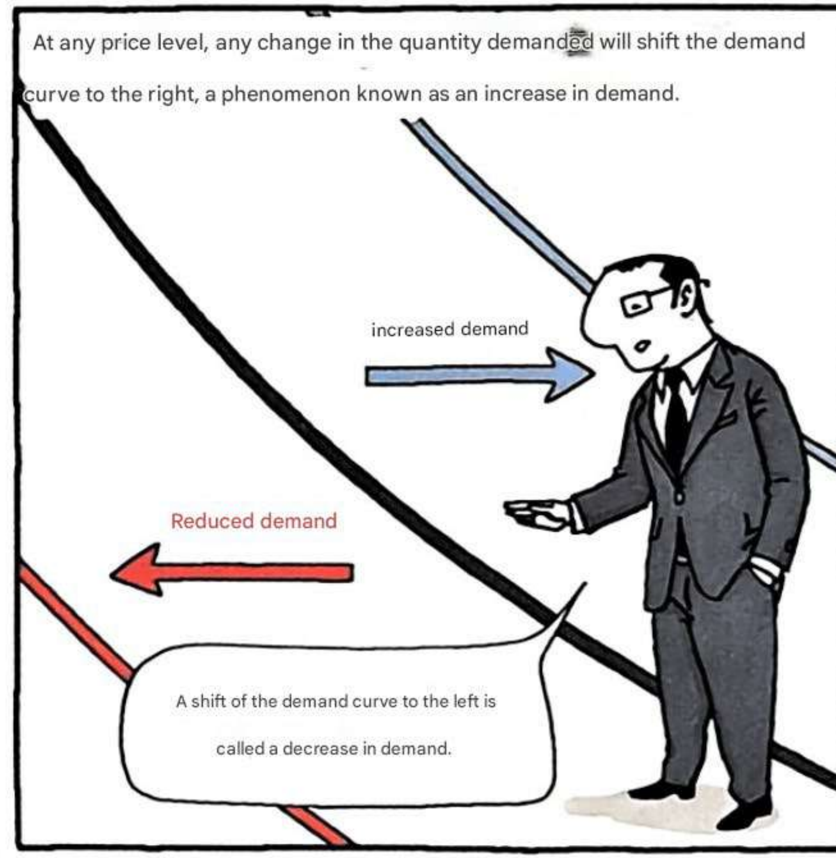
The line that illustrates the negative correlation between price and quantity demanded is called "the demand curve". By convention, the price is on the vertical axis, and the quantity demanded is on the horizontal axis.





The Law of Demand and the Shift of the Demand Curve





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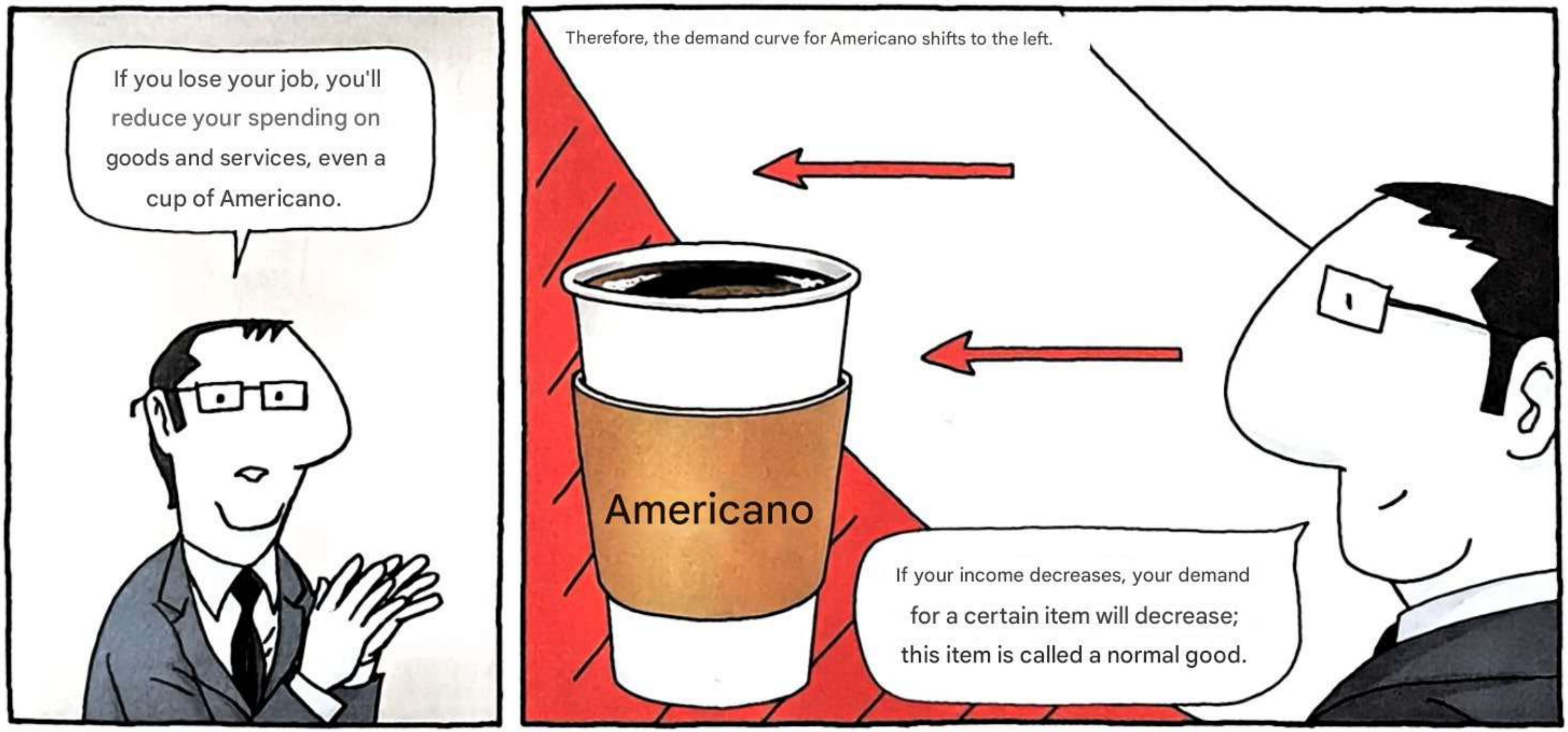

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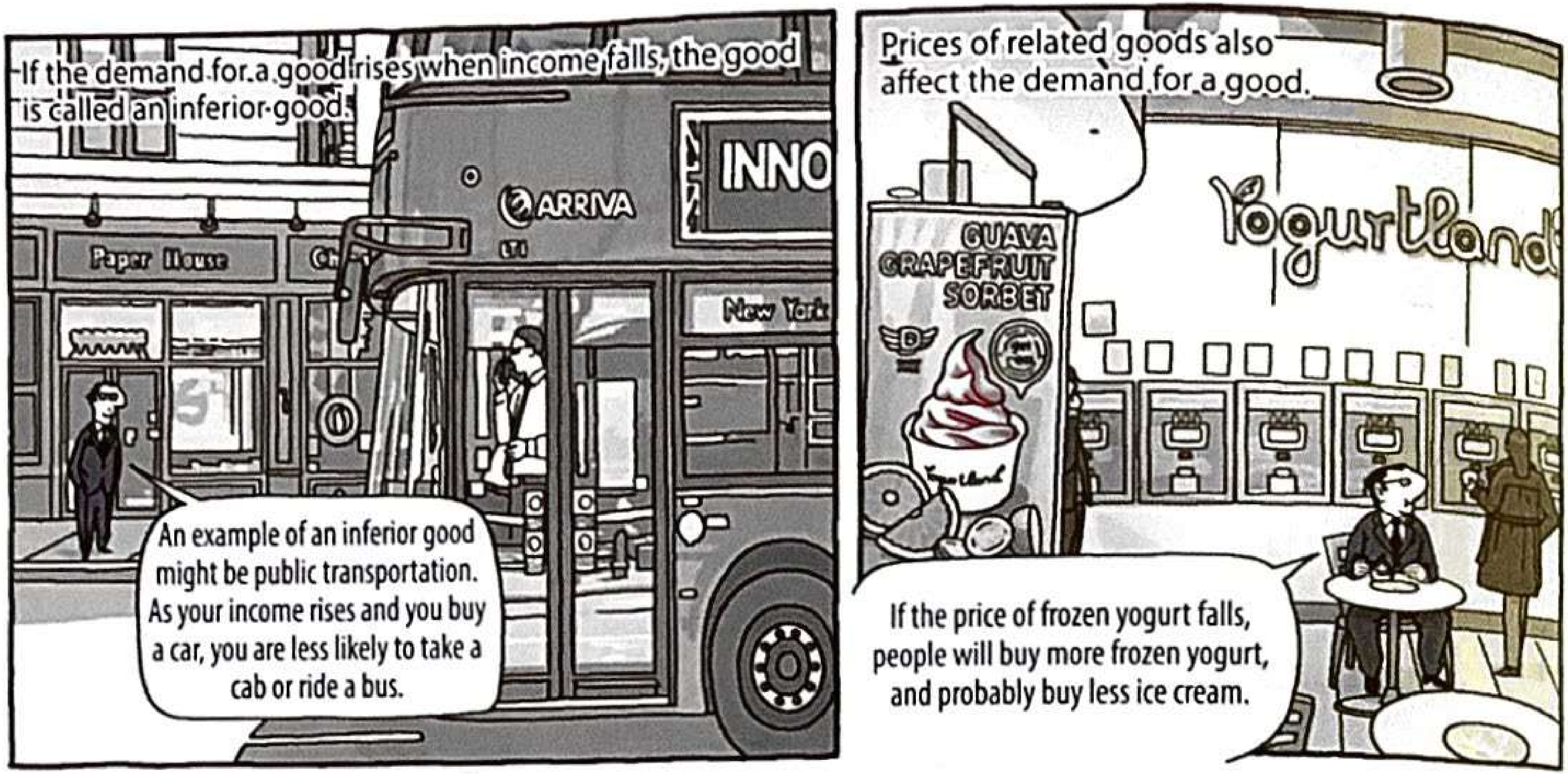

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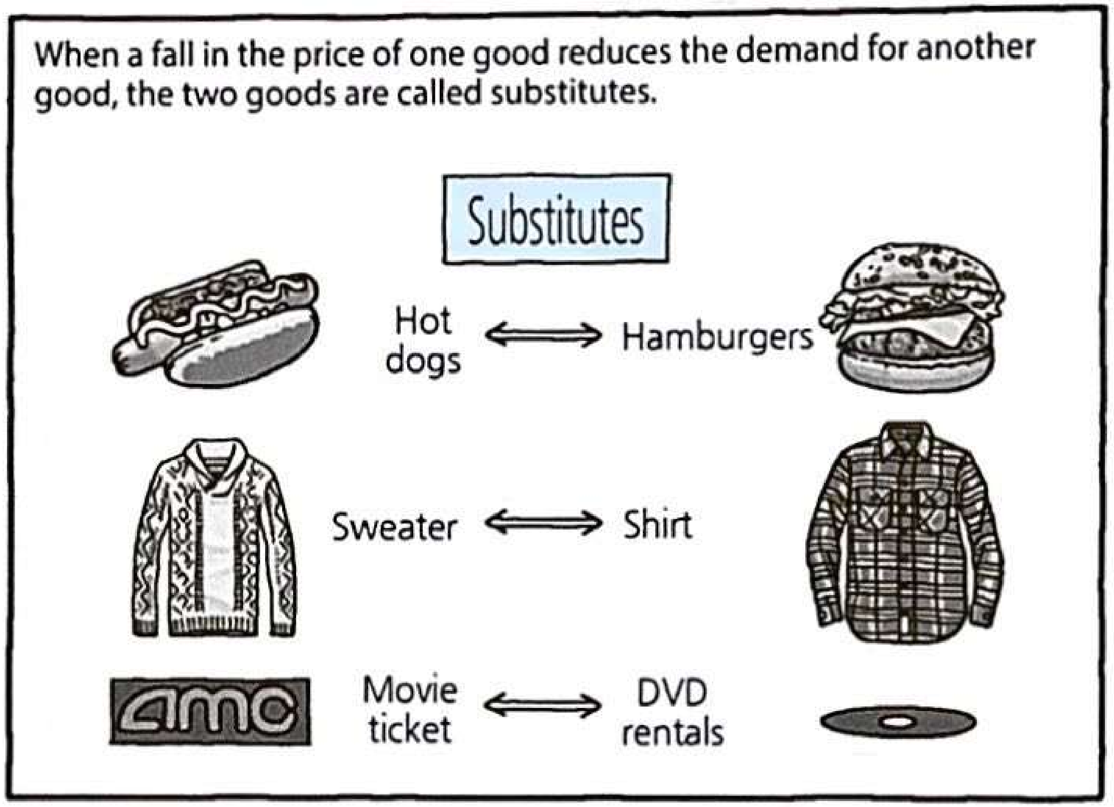

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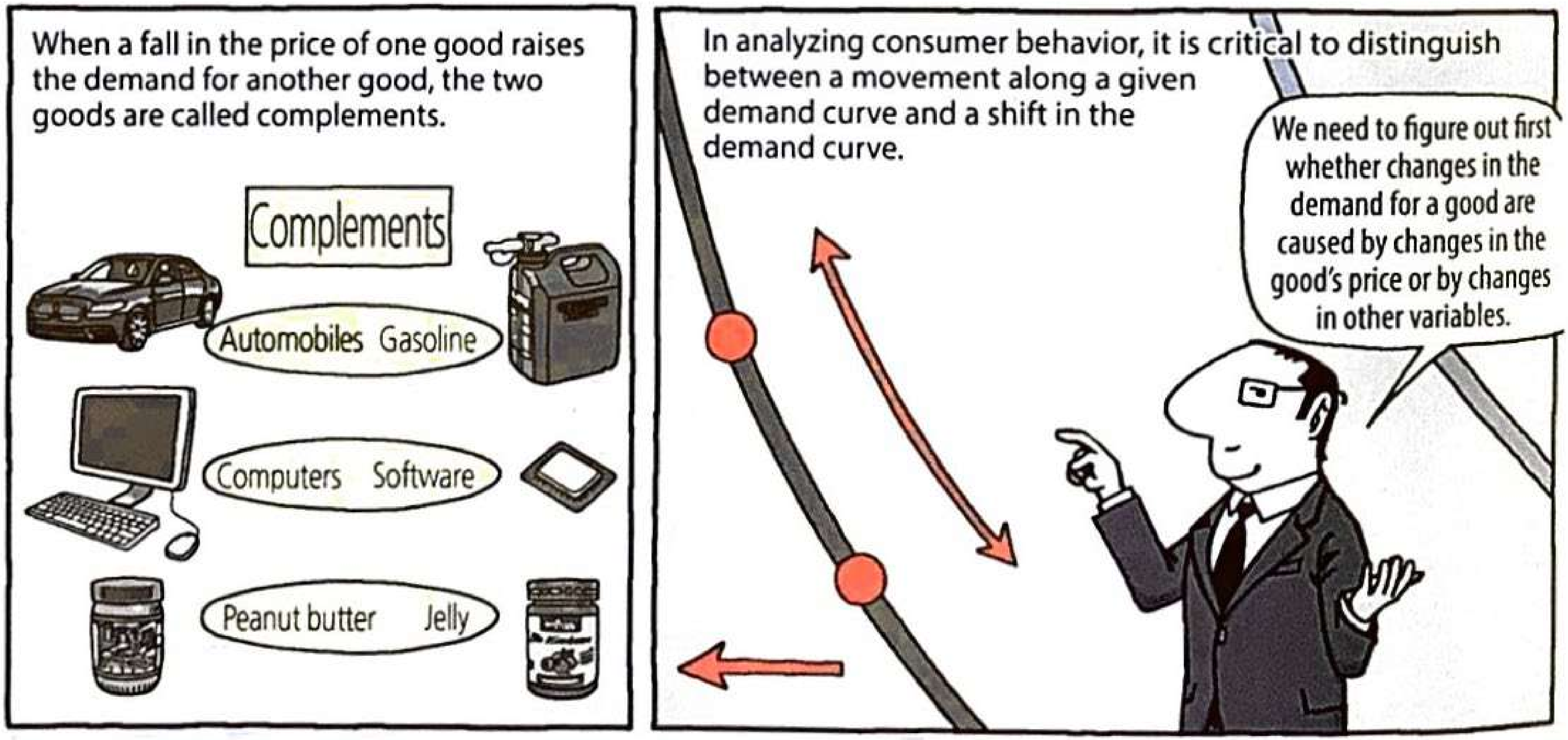
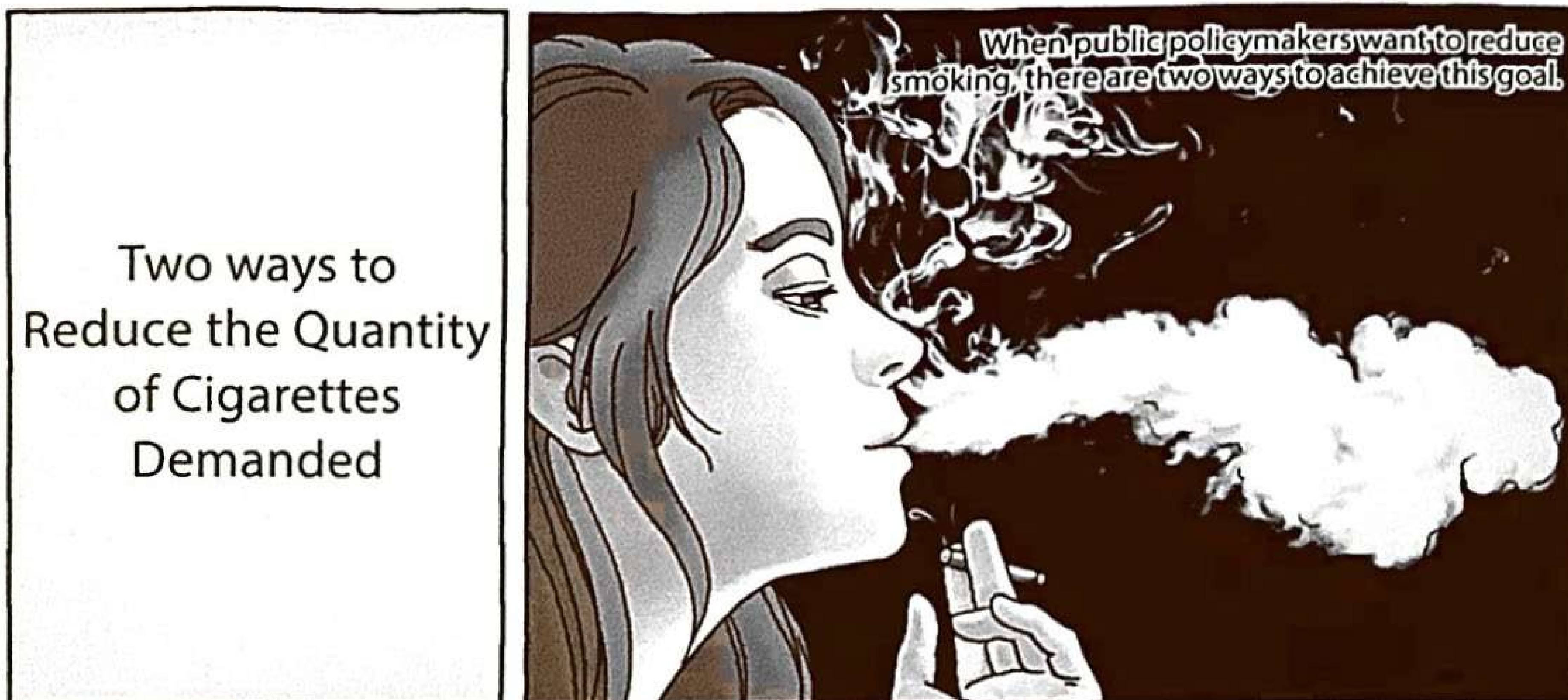


Two ways to reduce cigarette demand



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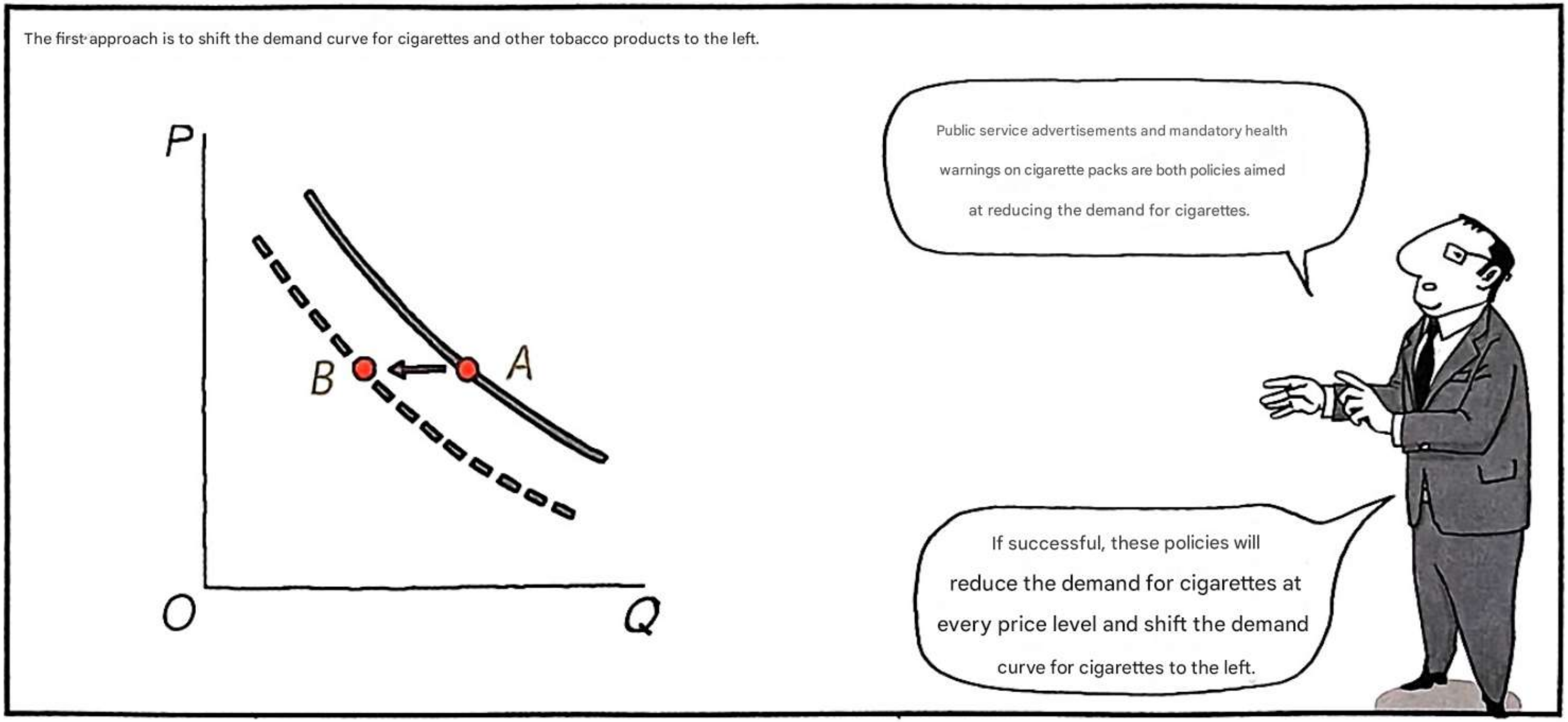

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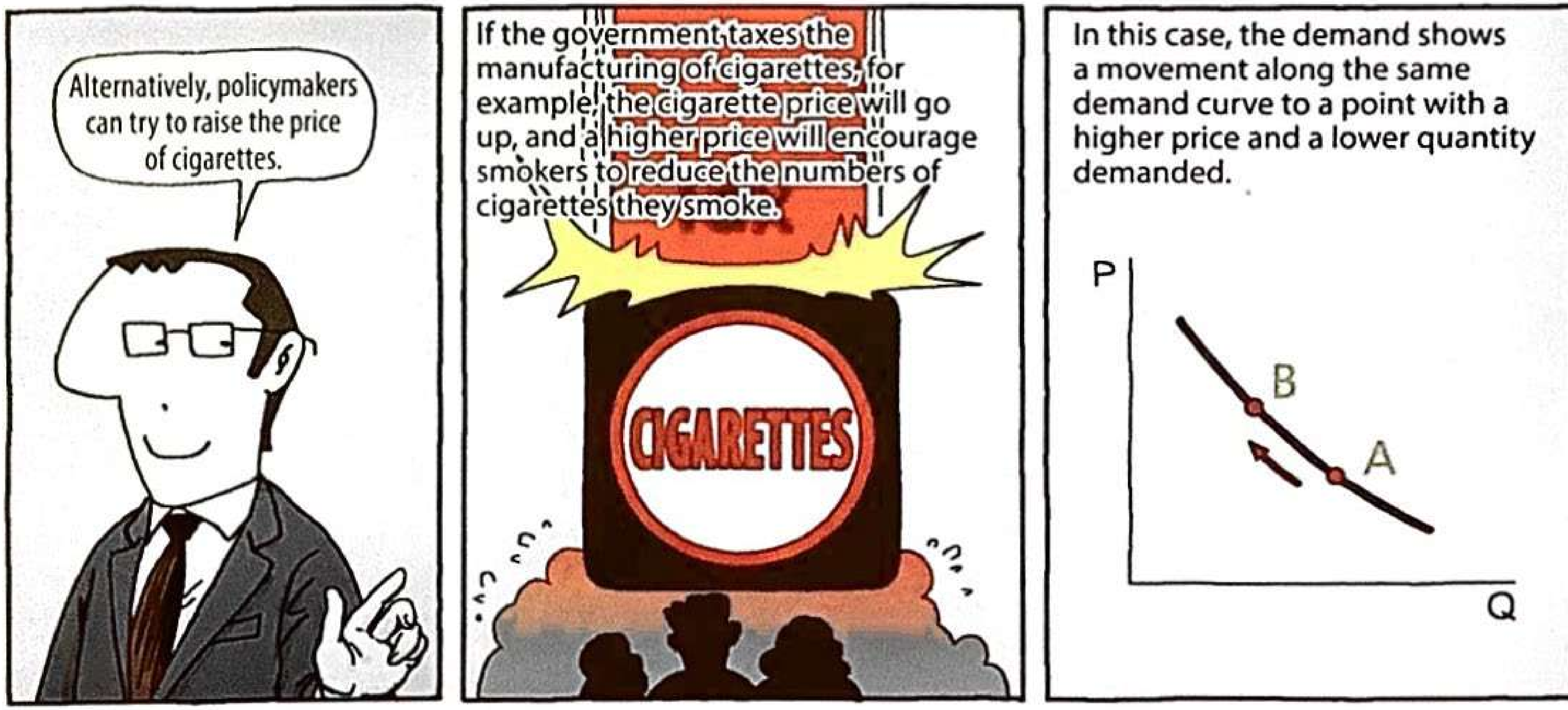

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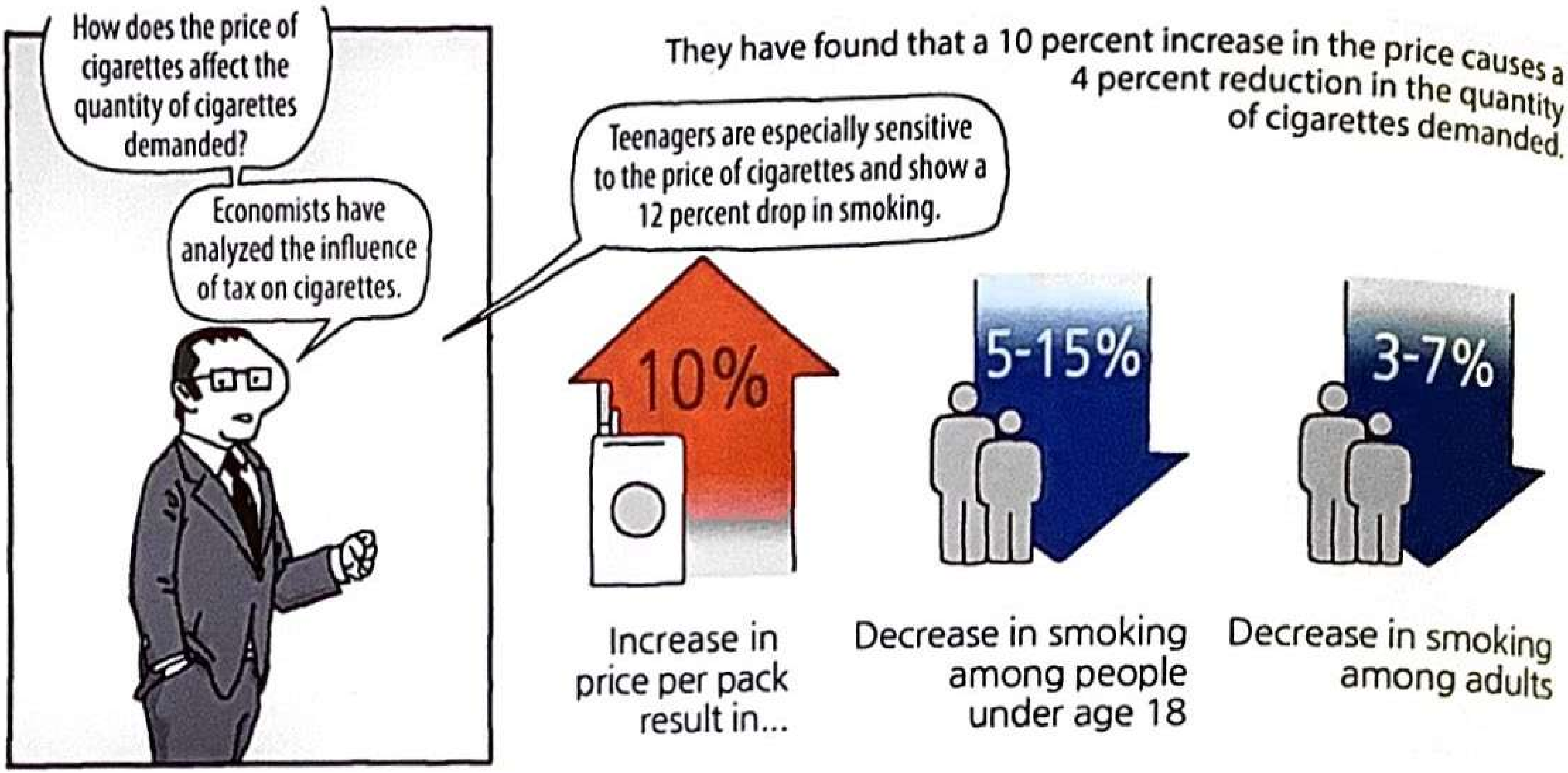


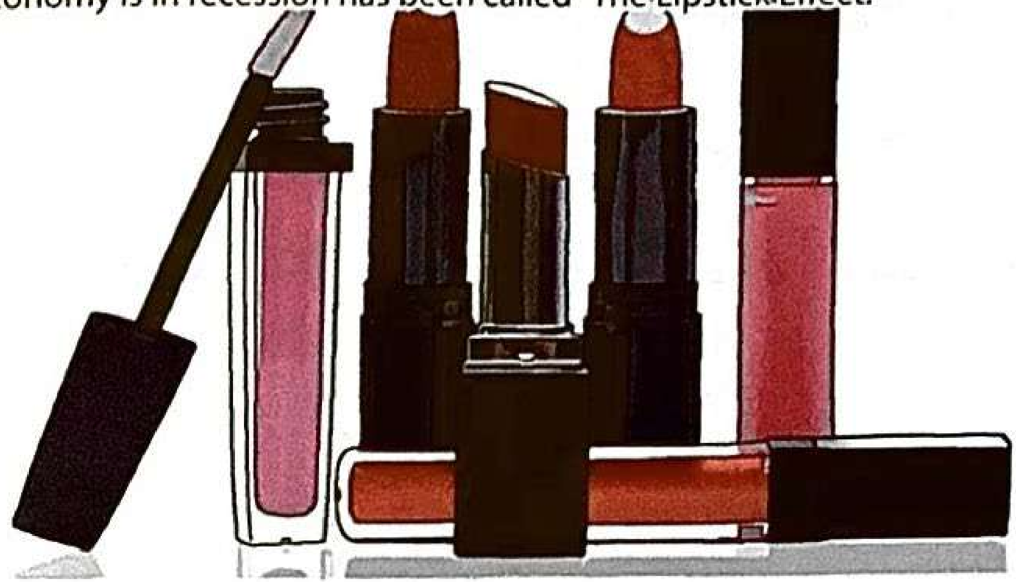
Two ways to reduce cigarette demand

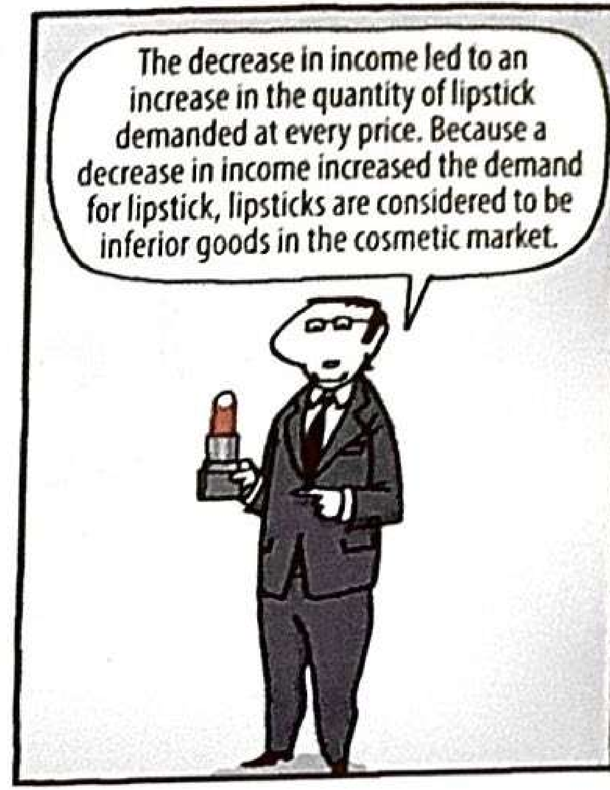
Two ways to reduce cigarette demand

Lipstick effect

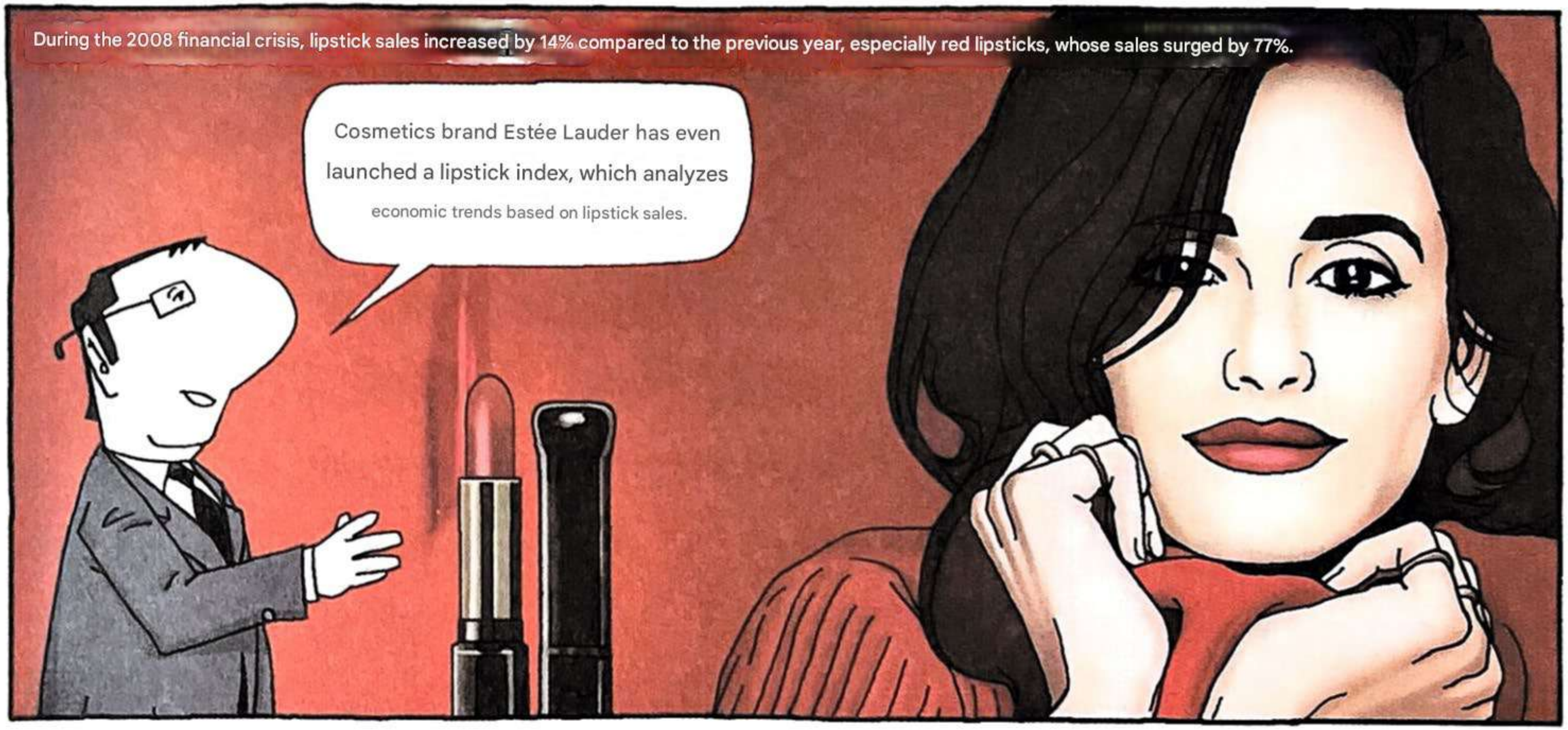
Lipstick effect

During the Great Depression, many women could not fulfill their needs for beauty due to a decrease in income, and they purchased cheaper items like lipsticks for vicarious pleasure. Since then, the phenomenon, which shows a rise in the sale of less expensive goods when the economy is in recession has been called "The Lipstick Effect."





Lipstick effect



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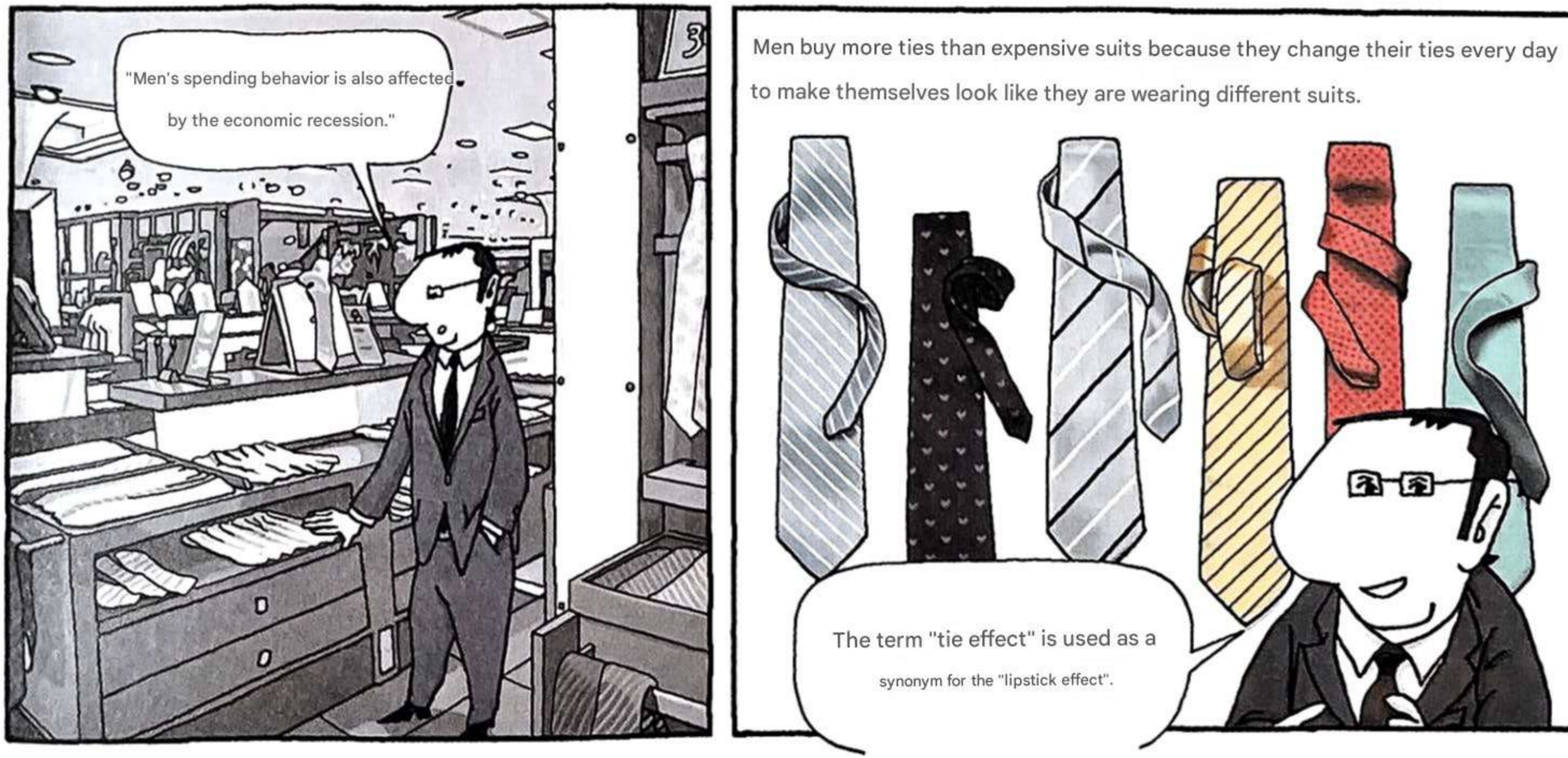

SUMMARY

- The quantity demanded of any good is the amount of that good that buyers are willing and able to purchase at a given price level.

- The quantity demanded of any good is determined by many factors, with the price of the good being the primary one.
  - When all other factors are held constant, if the price of a good rises, the quantity demanded for that good decreases; if the price of a good falls, the quantity demanded increases. Economists refer to this as the "law of demand."

SUMMARY

- The demand curve shows how the quantity demanded of a good changes when its price changes, assuming all other determinants of demand remain unchanged.

- However, if any determinant of demand other than the good's price changes, the demand curve will shift.
  - Any change that increases the quantity demanded at every price level shifts the demand curve to the right.
  - Any change that decreases the quantity demanded at every price level shifts the demand curve to the left.

SUMMARY

- There are many variables that can cause the demand curve to shift. The following are some of the most important ones:
- Income
  - If a decrease in income leads to a decrease in the demand for a good, that good is called a normal good.
  - If a decrease in income leads to an increase in the demand for a good, that good is called an inferior good.
- Prices of related goods
  - When a fall in the price of one good leads to a decrease in the demand for another good, the two goods are called substitutes.
  - When a fall in the price of one good leads to an increase in the demand for another good, the two goods are called complements.

SUMMARY

- Tastes
  - People's tastes are shaped by historical and psychological forces that extend beyond the field of economics. However, what happens when people's tastes change is a subject of economic analysis.

- Expectations
  - Expectations about the future can affect the current demand for a good or service.

- Number of buyers
  - If the number of buyers increases (decreases), the demand curve will shift to the right (left).

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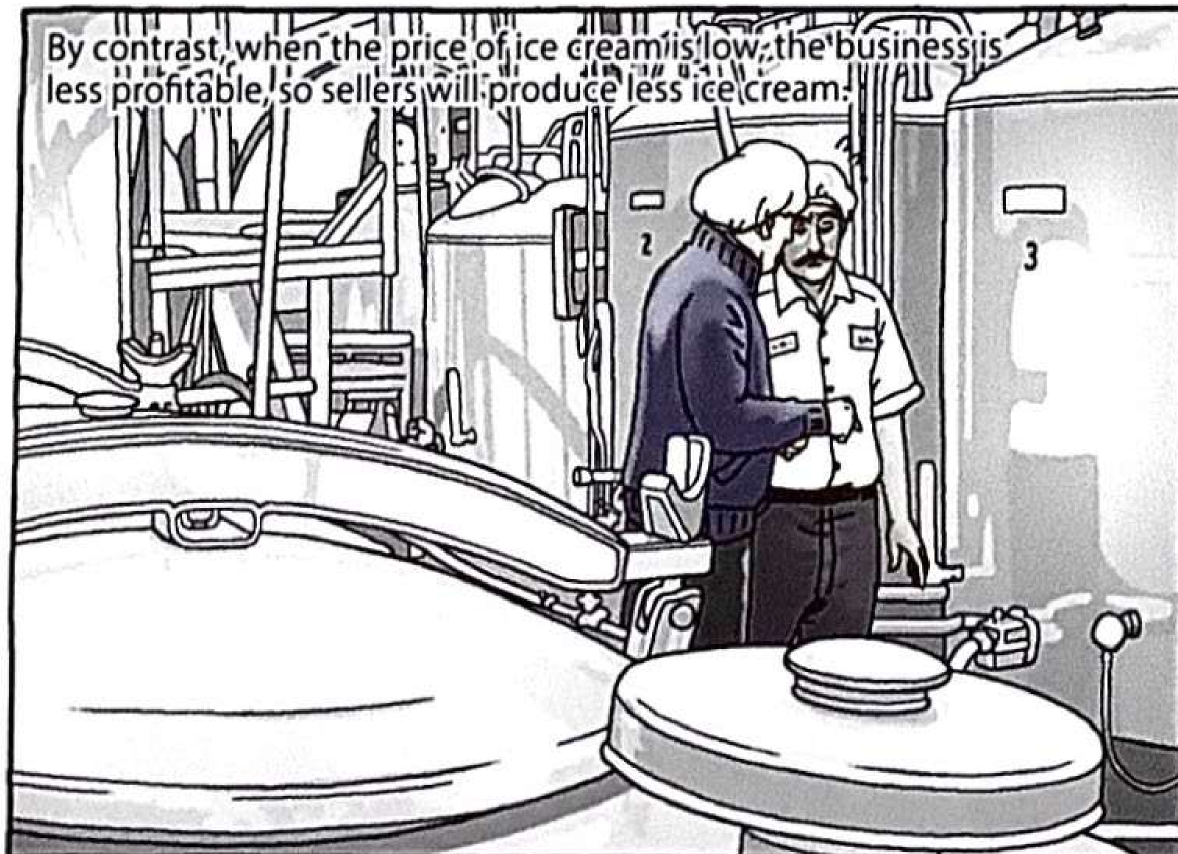

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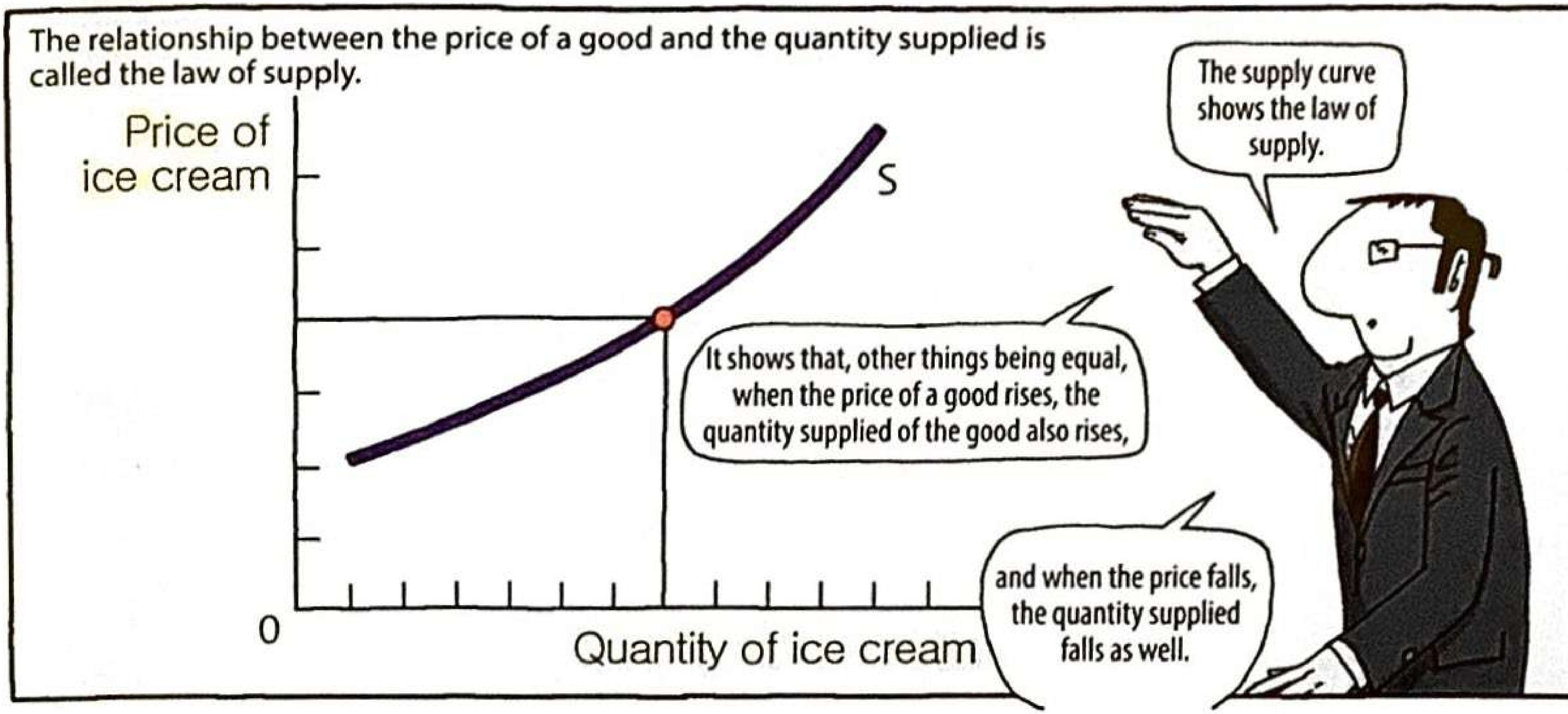
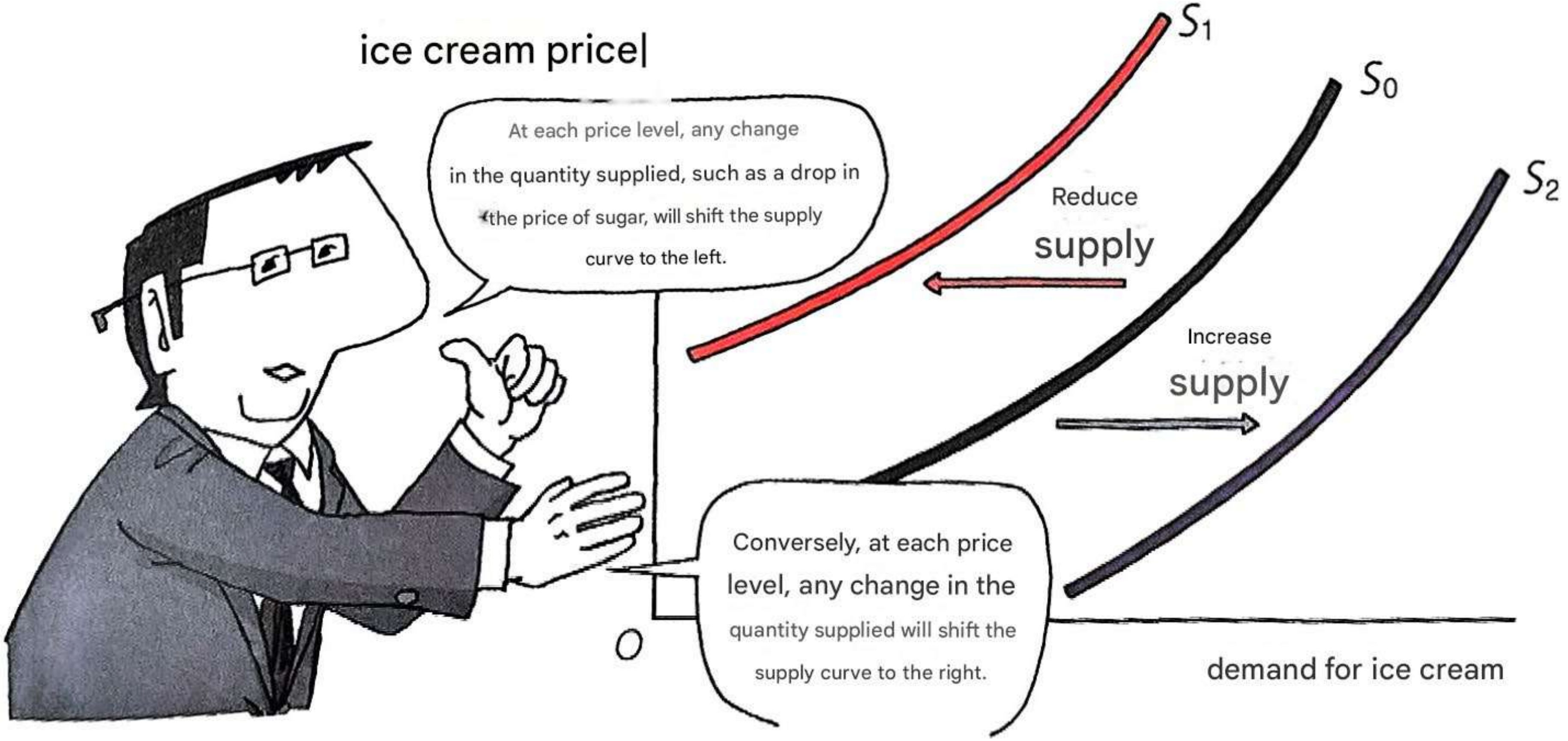


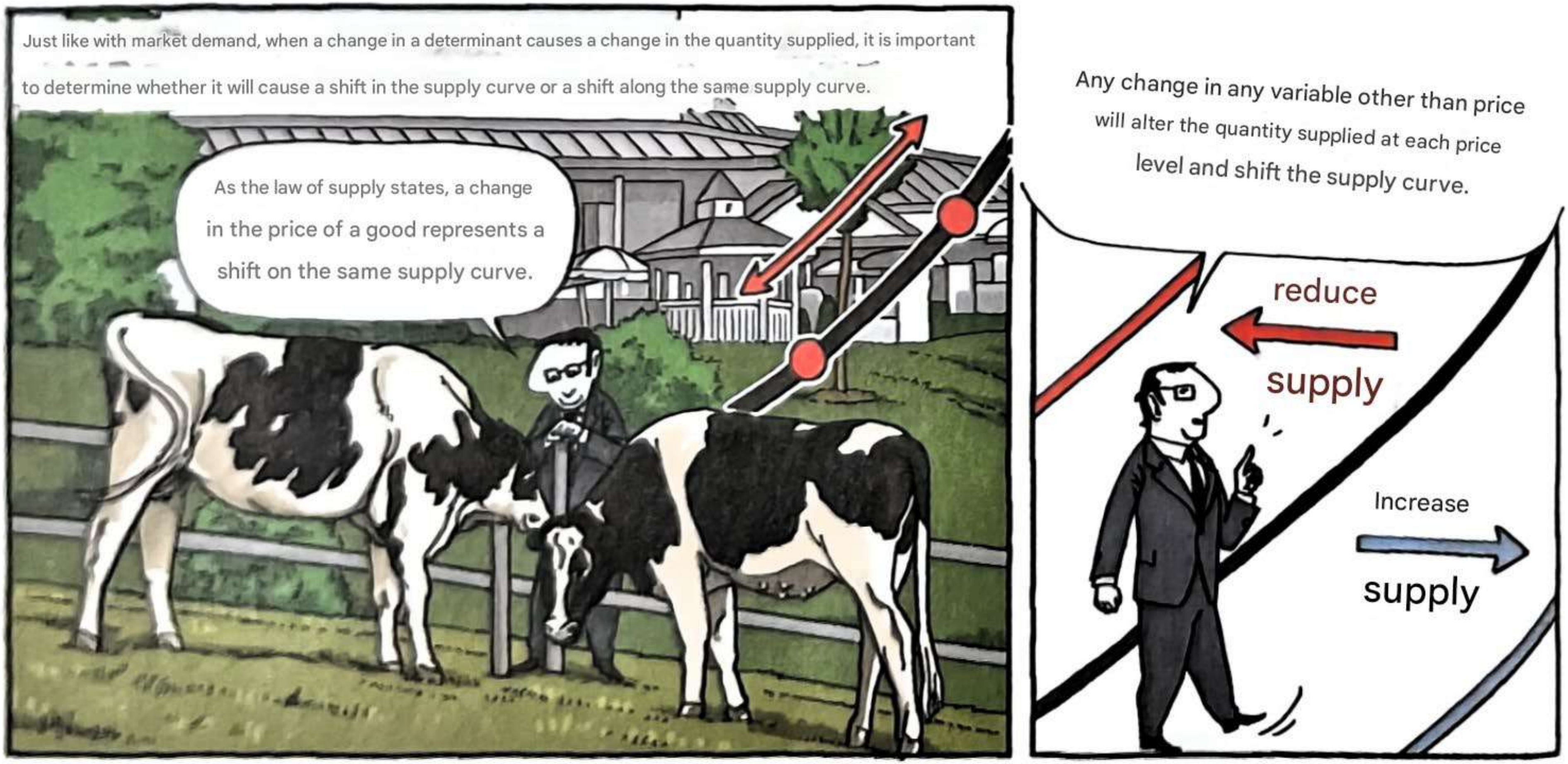
The Law of Supply and Shifts in the Supply Curve

The supply curve shifts when any factor other than price changes.



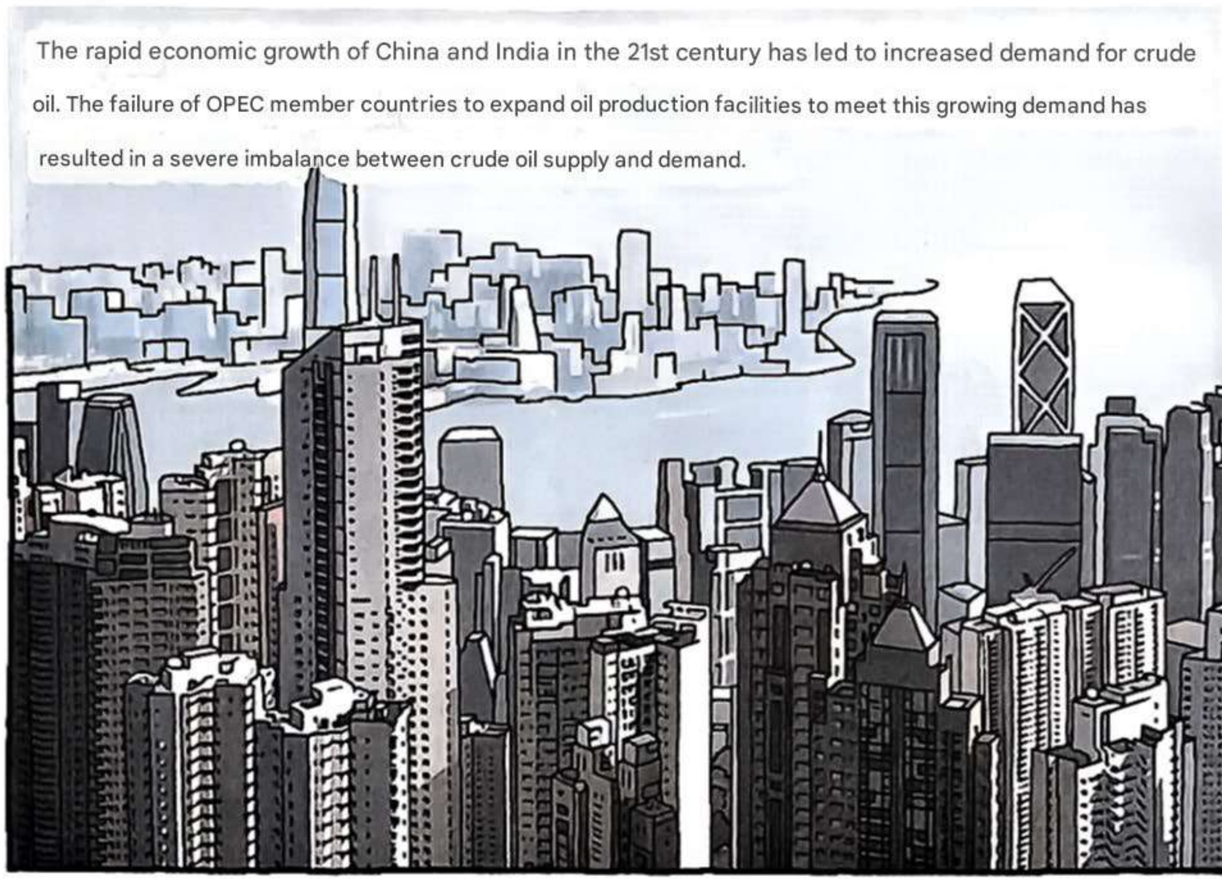
There are many variables that can shift the supply curve. Here are some of the most important ones.

The Law of Supply and Shifts in the Supply Curve

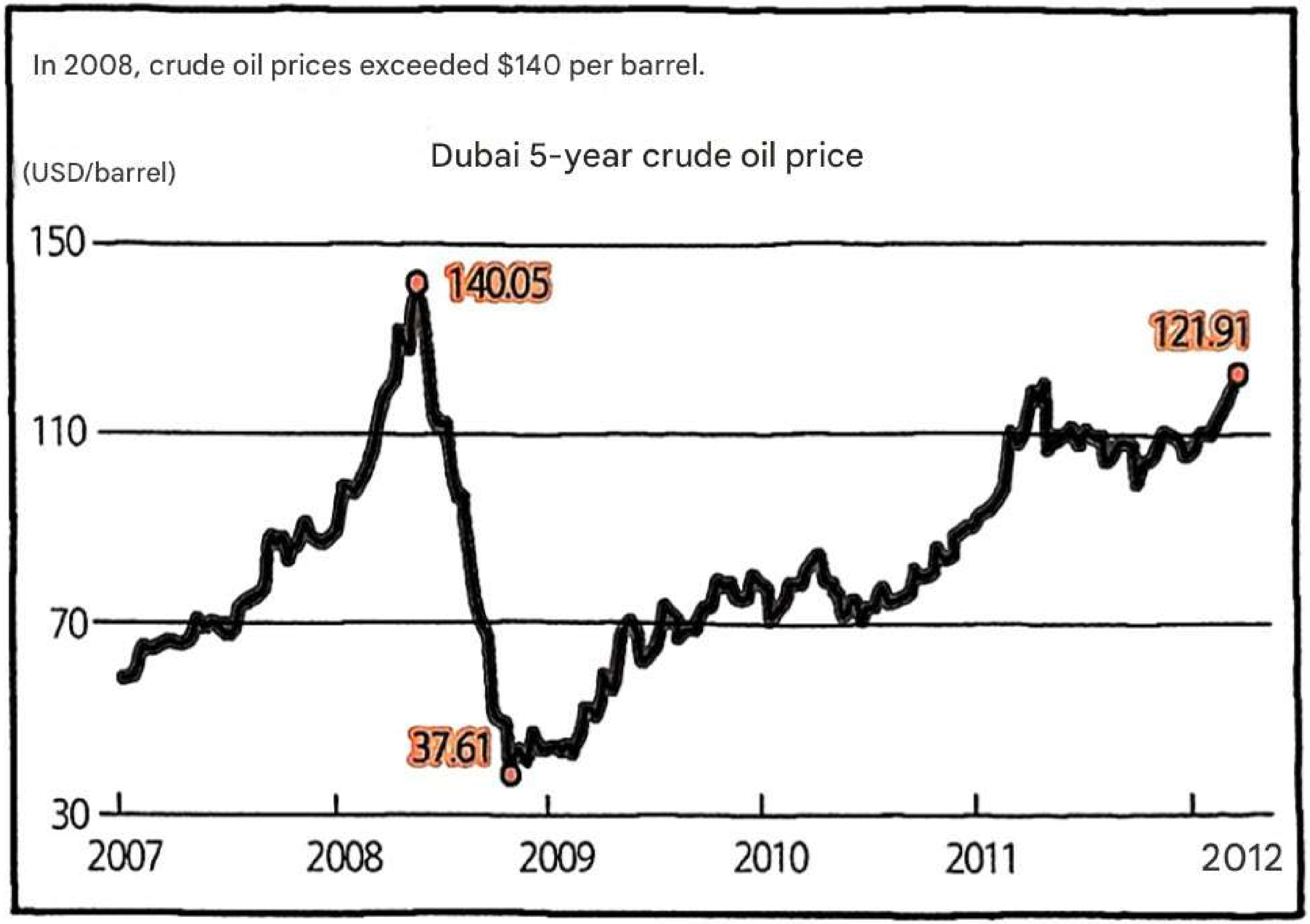


High oil prices and flight routes

High oil prices and routes



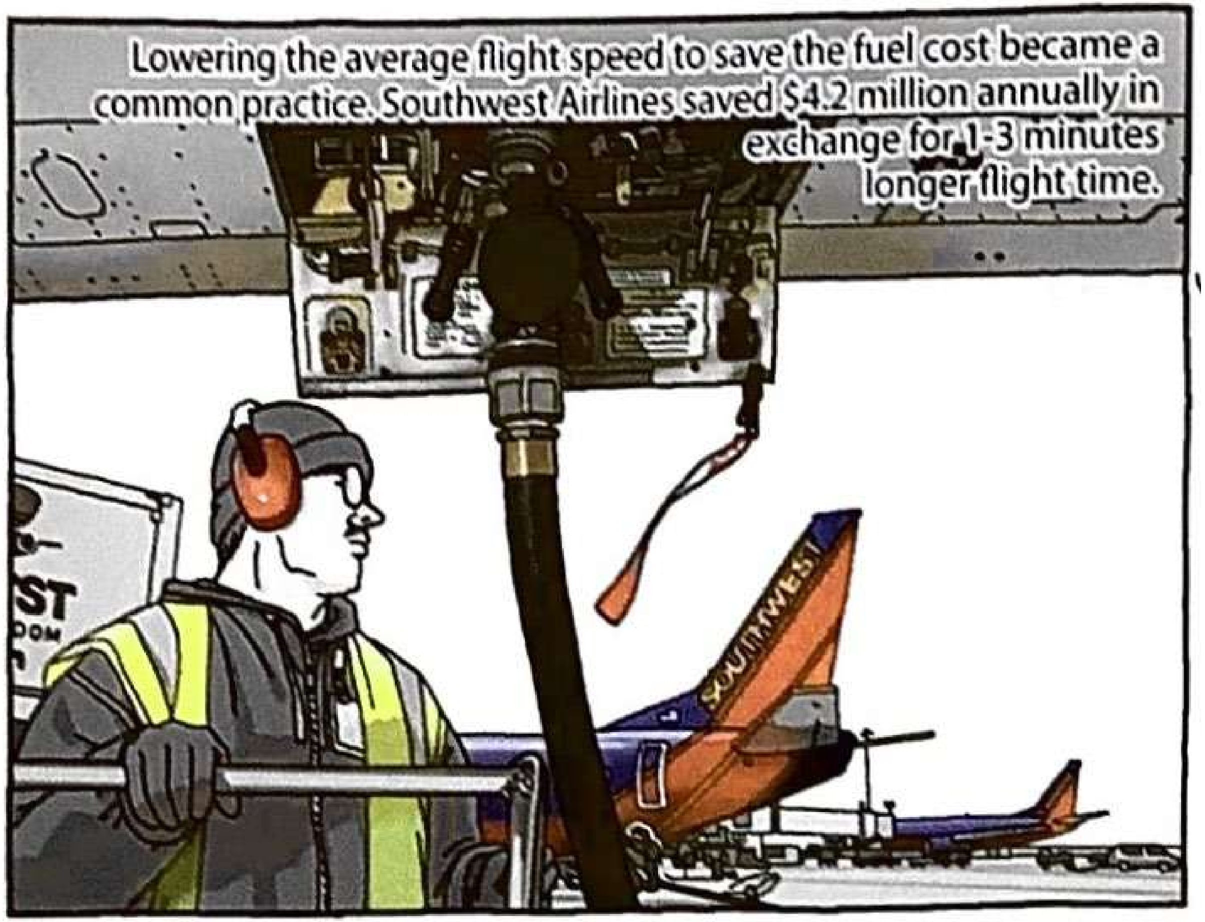
High oil prices and flight routes



High oil prices and flight routes

With crude oil prices hitting record highs in 2008, many airlines around the world faced financial risks. They closed some routes and reduced their workforce. To cut fuel costs, they reduced aircraft speeds and charged extra for baggage.

High oil prices and flight routes



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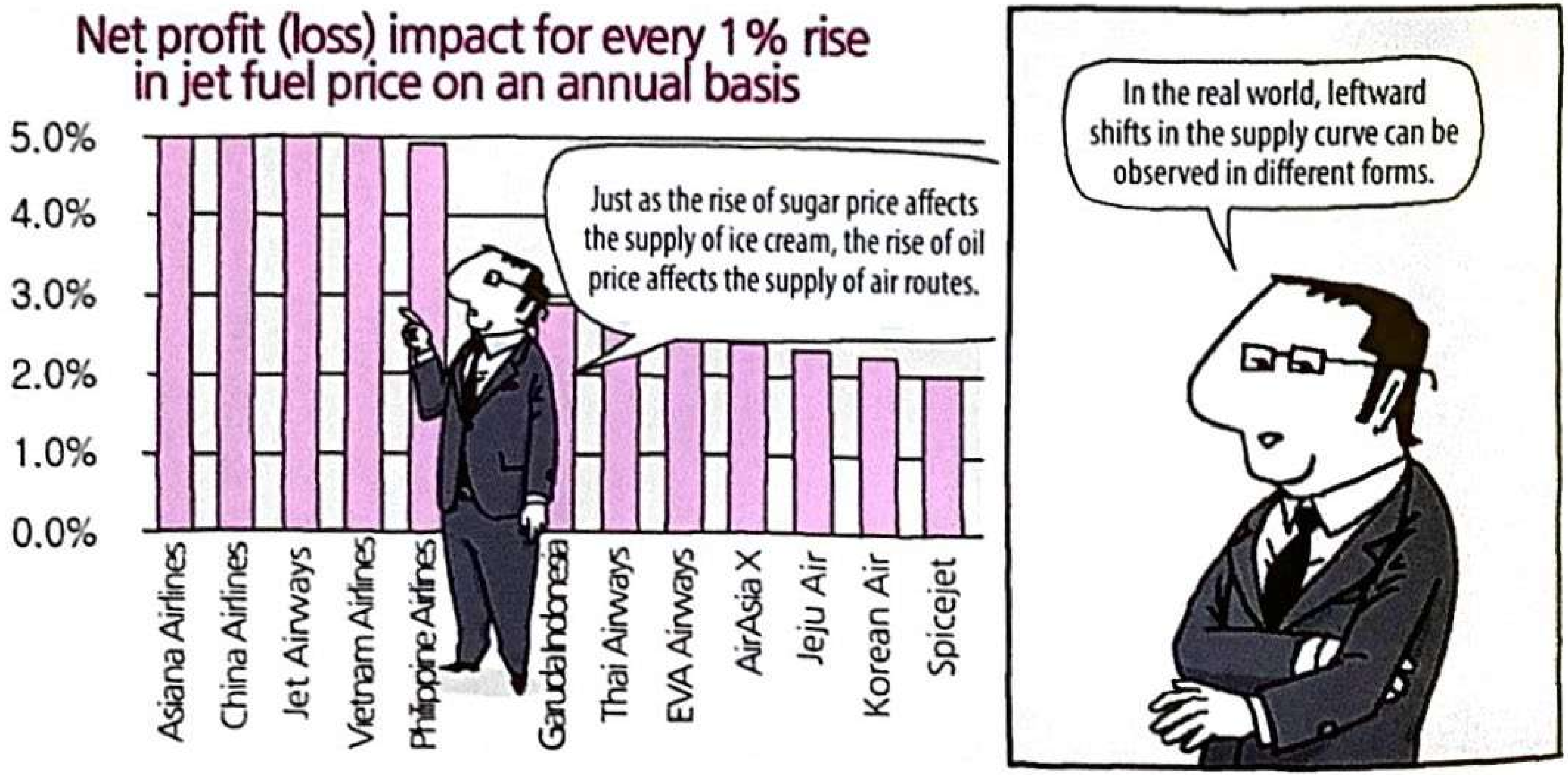
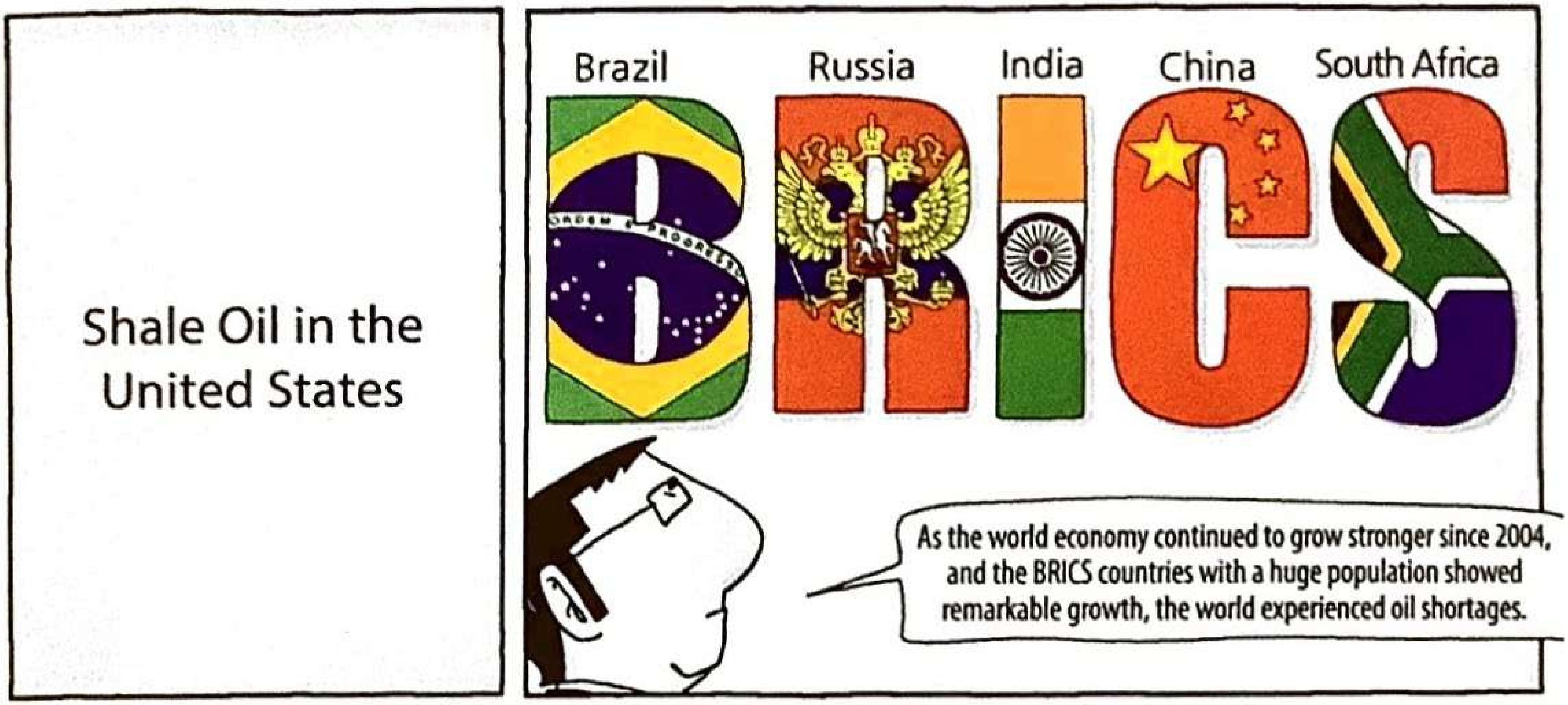


Shale Oil in the United States



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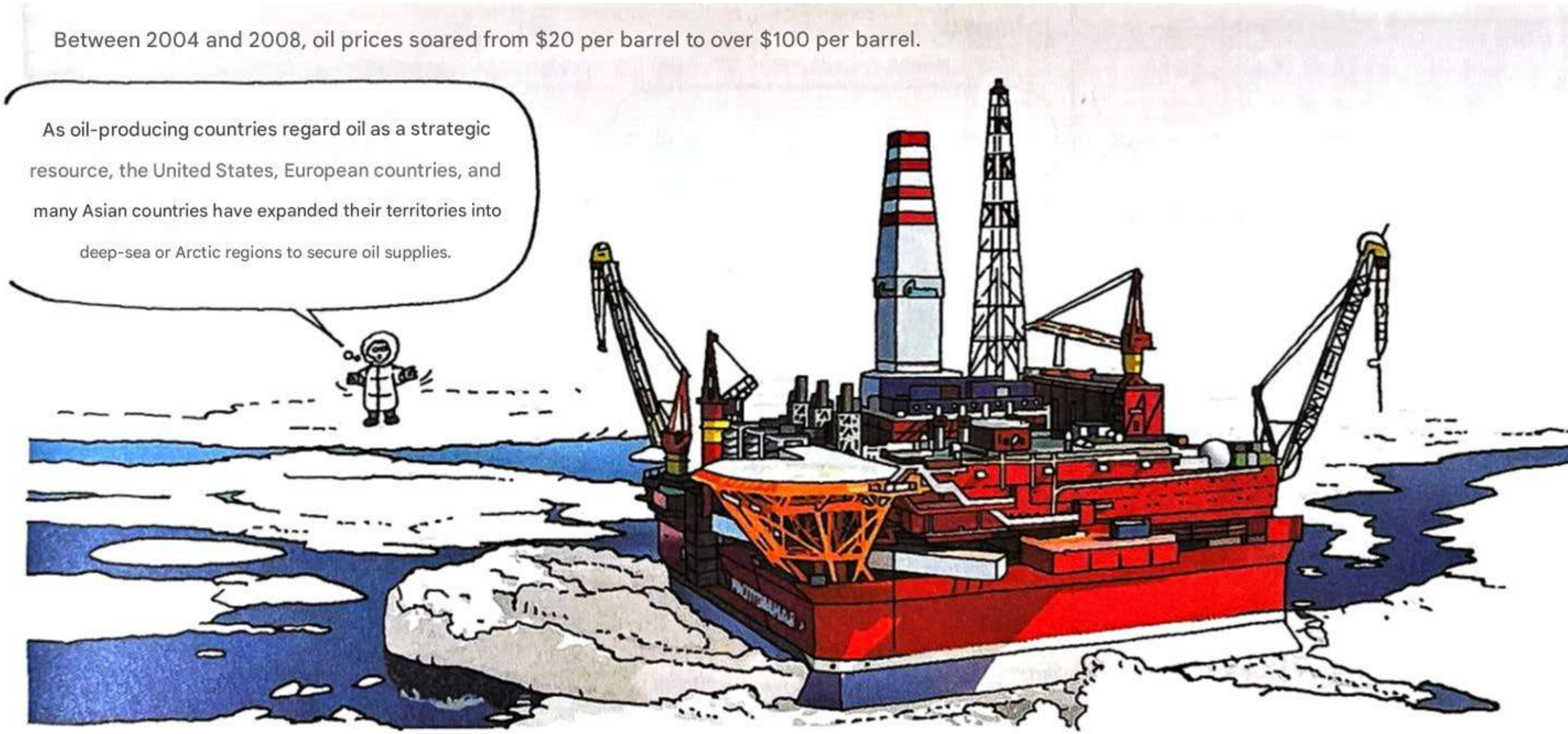

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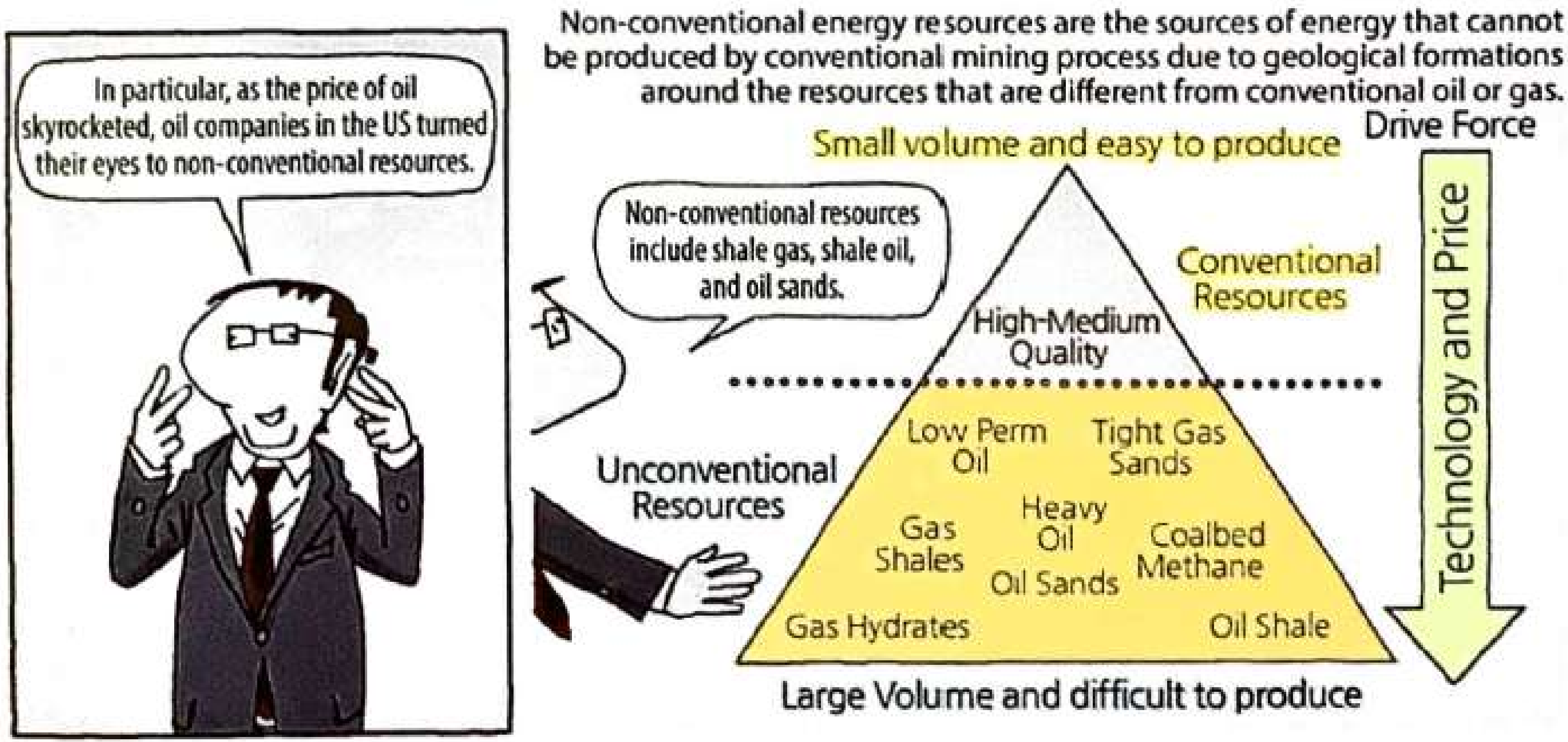

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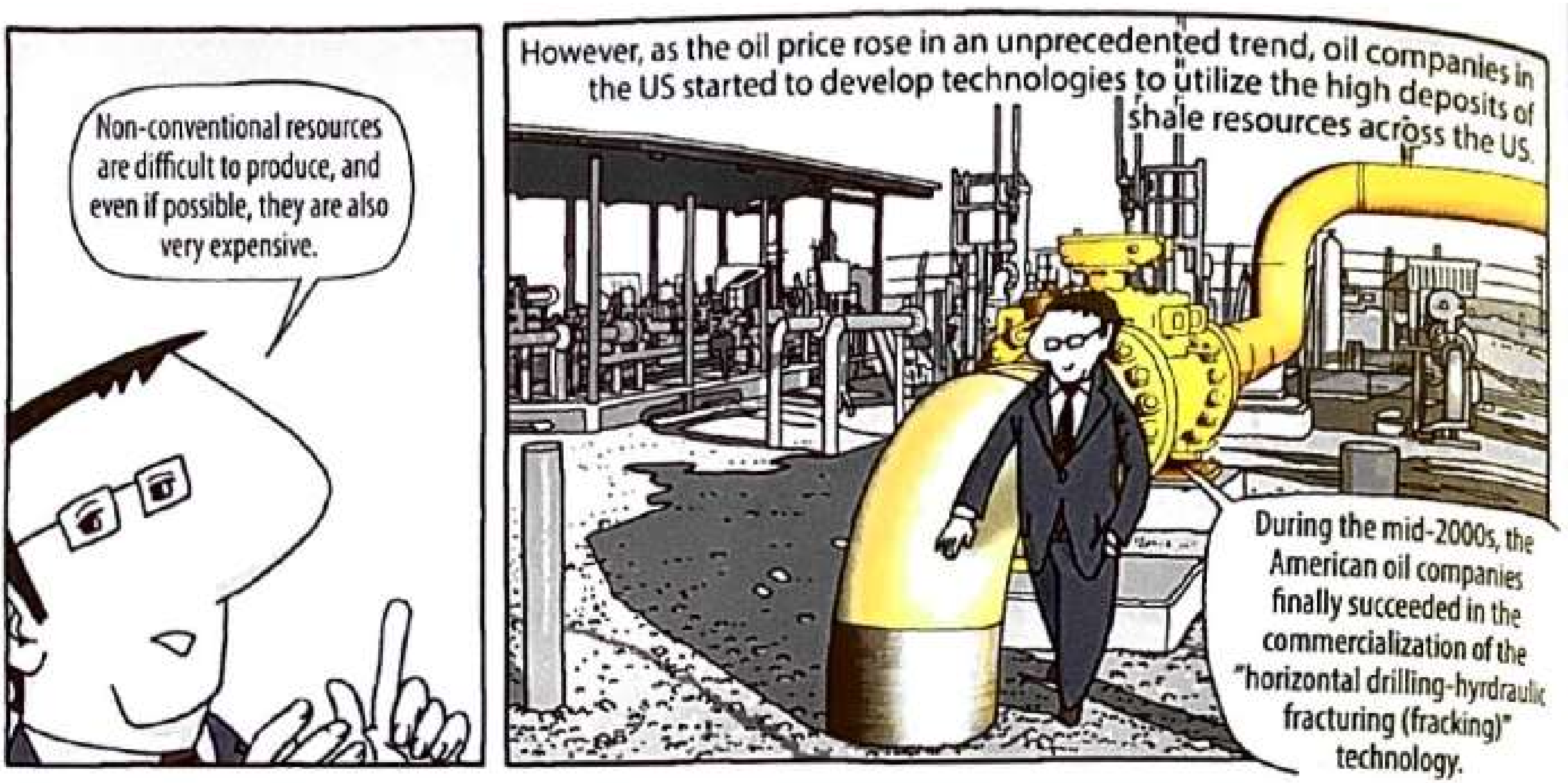

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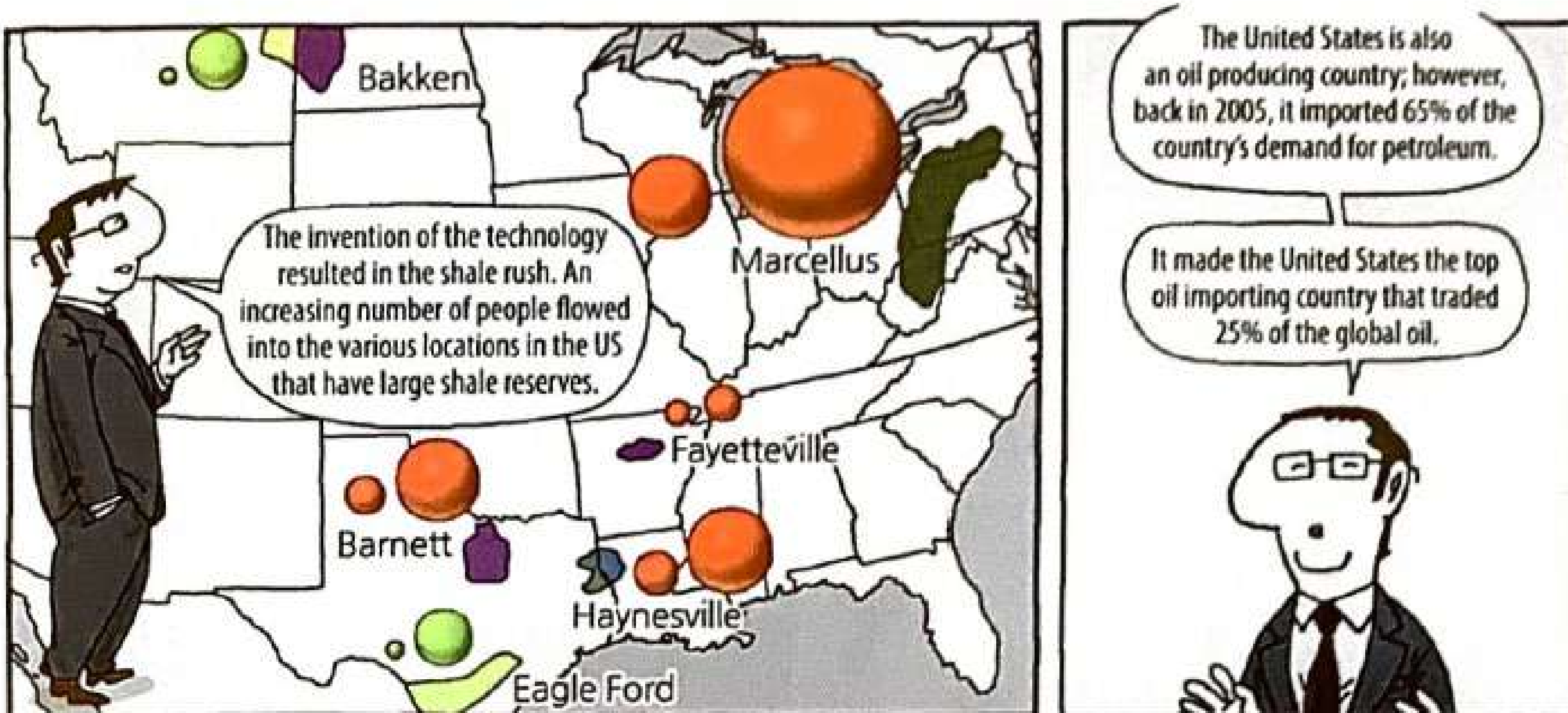

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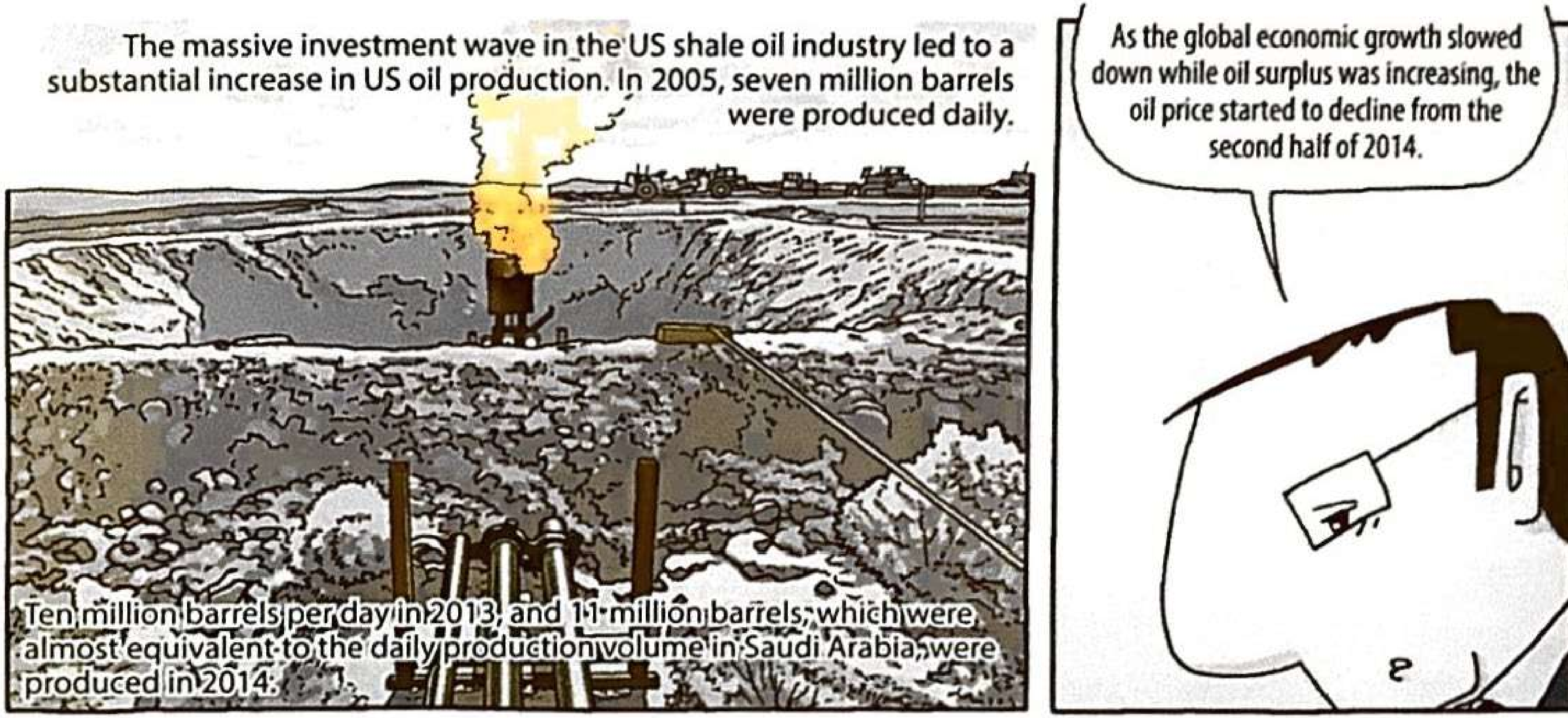

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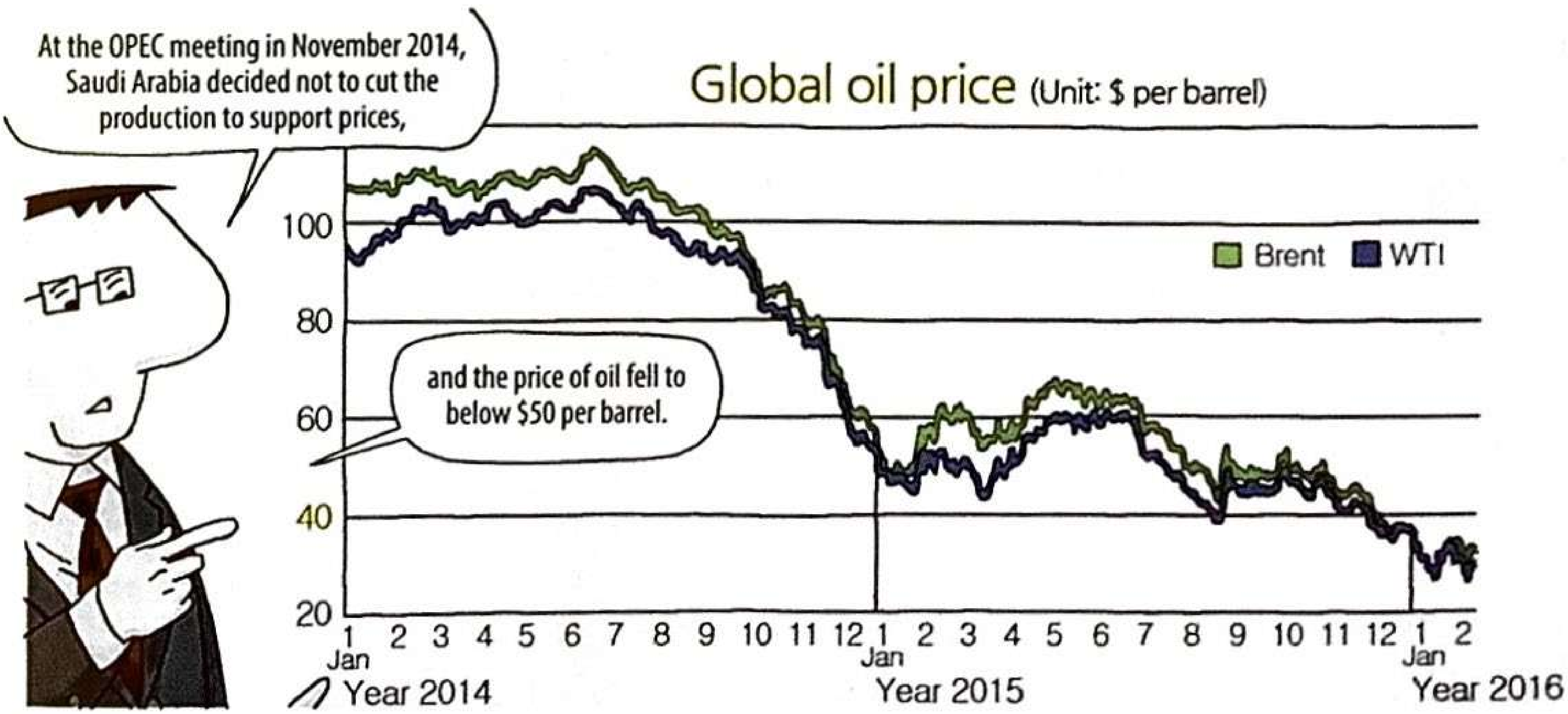
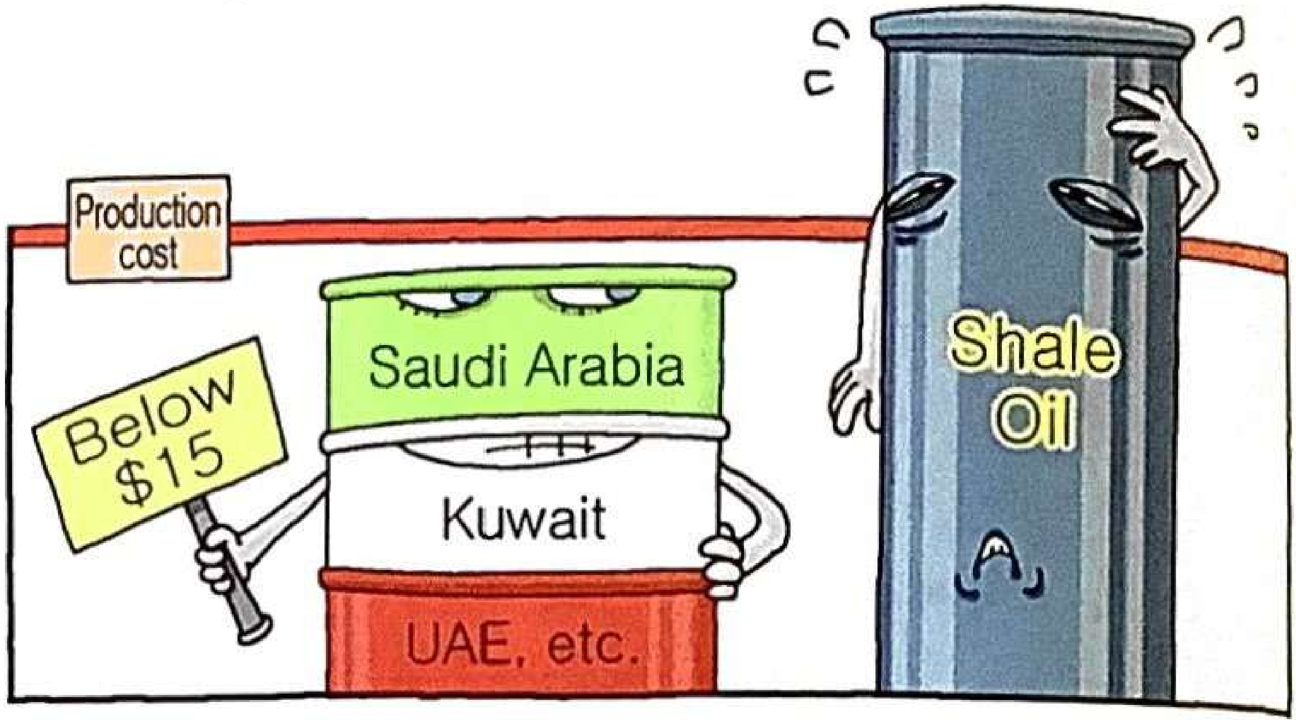


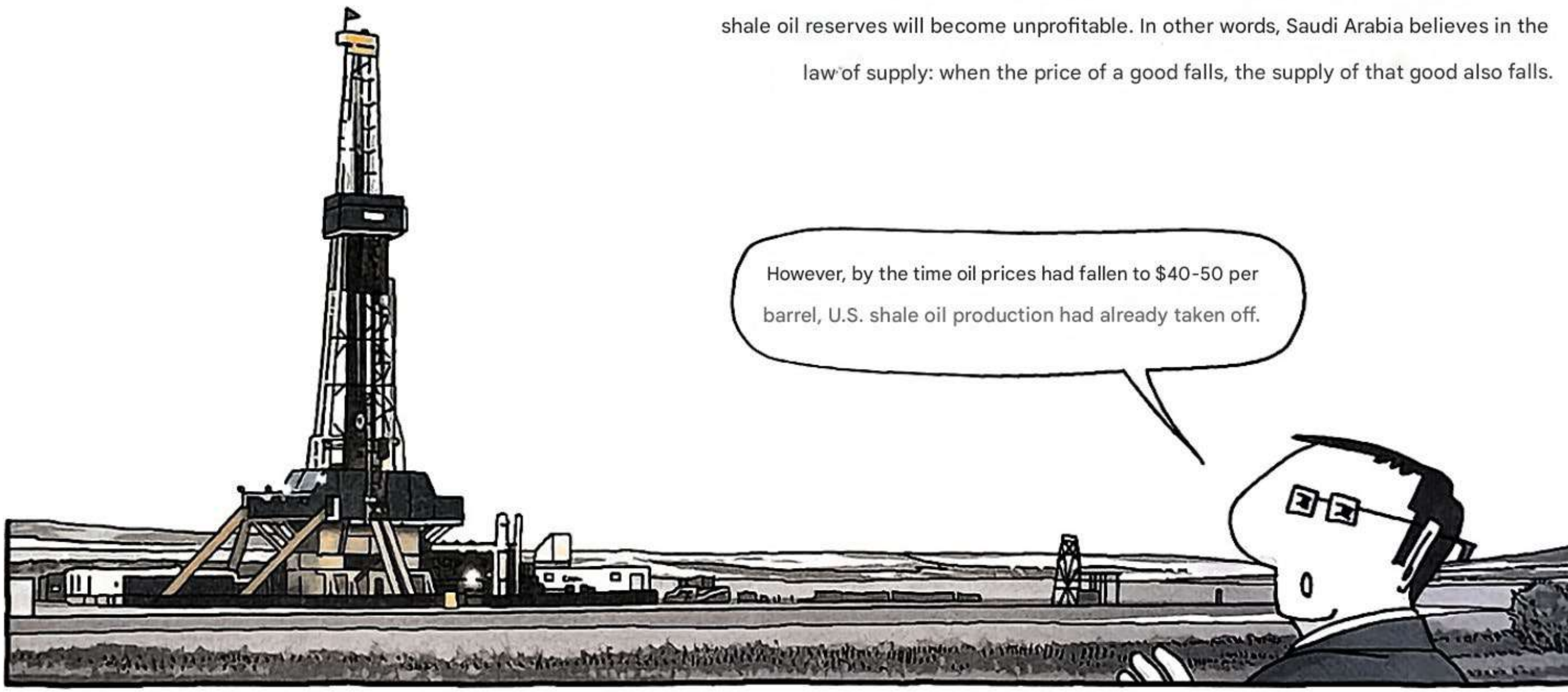
Shale Oil in the United States

Therefore, focusing on price competition seemed more effective in forcing the US shale players to exit the market. Because, OPEC countries' oil production cost was $15 per barrel, while the production cost of shale oil was multiple times higher.

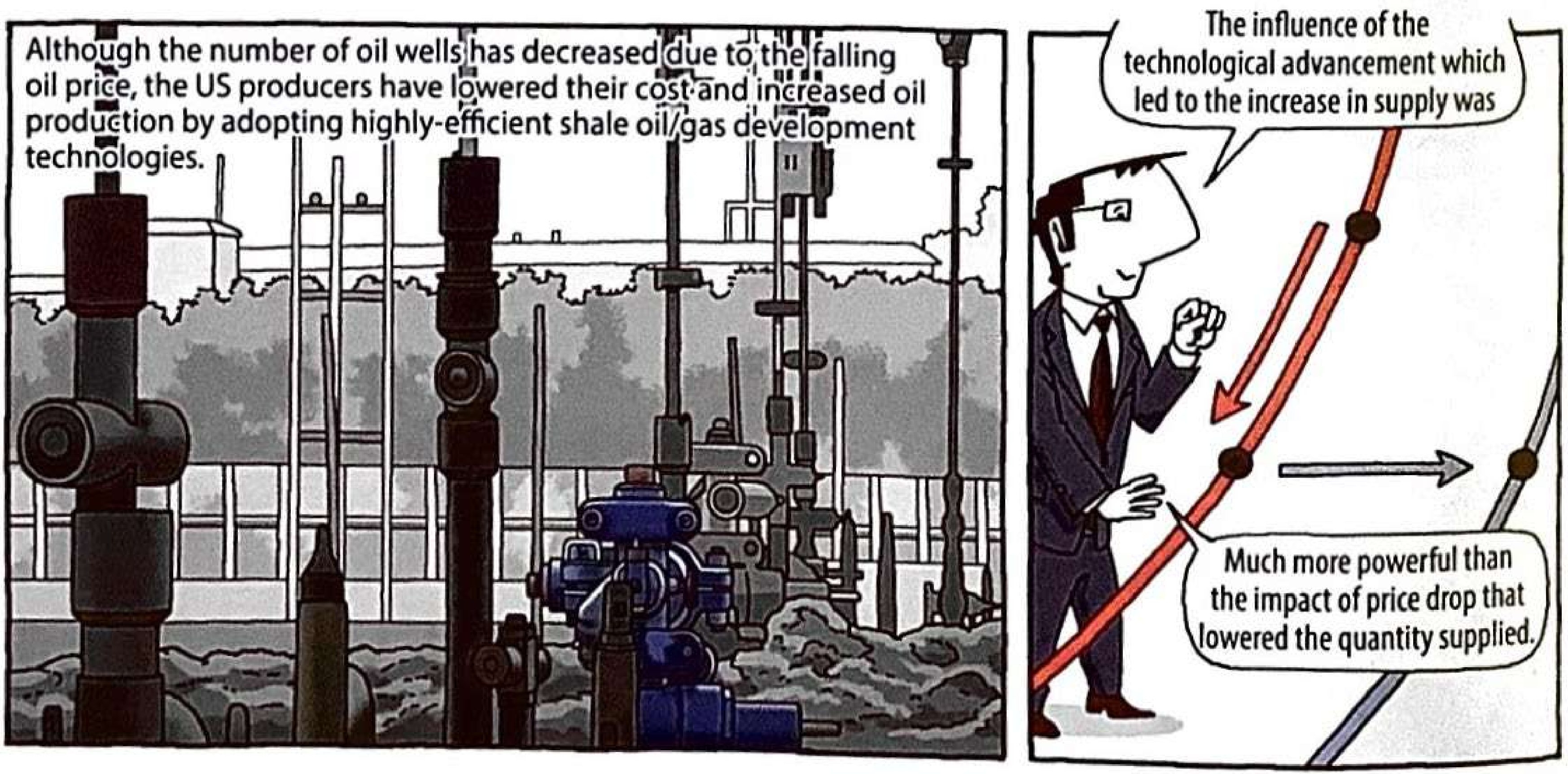


Shale Oil in the United States

US economic analysts suggest that when global oil prices reach $60 per barrel, half of the US shale oil reserves will become unprofitable. In other words, Saudi Arabia believes in the law of supply: when the price of a good falls, the supply of that good also falls.



Shale Oil in the United States



SUMMARY

- The quantity supplied of any good or service refers to the amount that sellers are willing and able to sell.
- There are many determinants of quantity supplied, but price plays the most significant role. The relationship between the price of a good and its quantity supplied is known as the law of supply.
  - It states that, all else being equal, when the price of a good rises, the quantity supplied of that good also rises; when the price falls, the quantity supplied falls as well.

SUMMARY

- Changes in any other factors that affect producers determine the quantity sold. However, when any factor other than the price of the good changes, the supply curve shifts.
  - Any change that reduces the quantity supplied at every price level, such as a decrease in the price of sugar, will shift the supply curve to the left.
  - Conversely, any change that increases the quantity supplied at every price level will shift the supply curve to the right.

SUMMARY

- There are several variables that can cause the supply curve to shift. The following are some of the most important ones:
  - **Input Prices**: When the price of one or more inputs rises, firms will reduce their supply. If input prices increase significantly, companies may even shut down production lines. Therefore, the quantity supplied of a good is negatively related to the price of the inputs used to produce it.
  - **Technology**: If advancements in production technology reduce the amount of labor required, firms' costs will decrease, and the supply of the good (e.g., ice cream) will increase.
  - **Expectations**: The current quantity supplied may depend on expectations about the future market. For example, if a firm expects the price of its product to rise in the future, it may store some of its current output, thereby reducing the current market supply.
  - **Number of Sellers**: If the number of sellers in the market decreases, market supply will also decrease.

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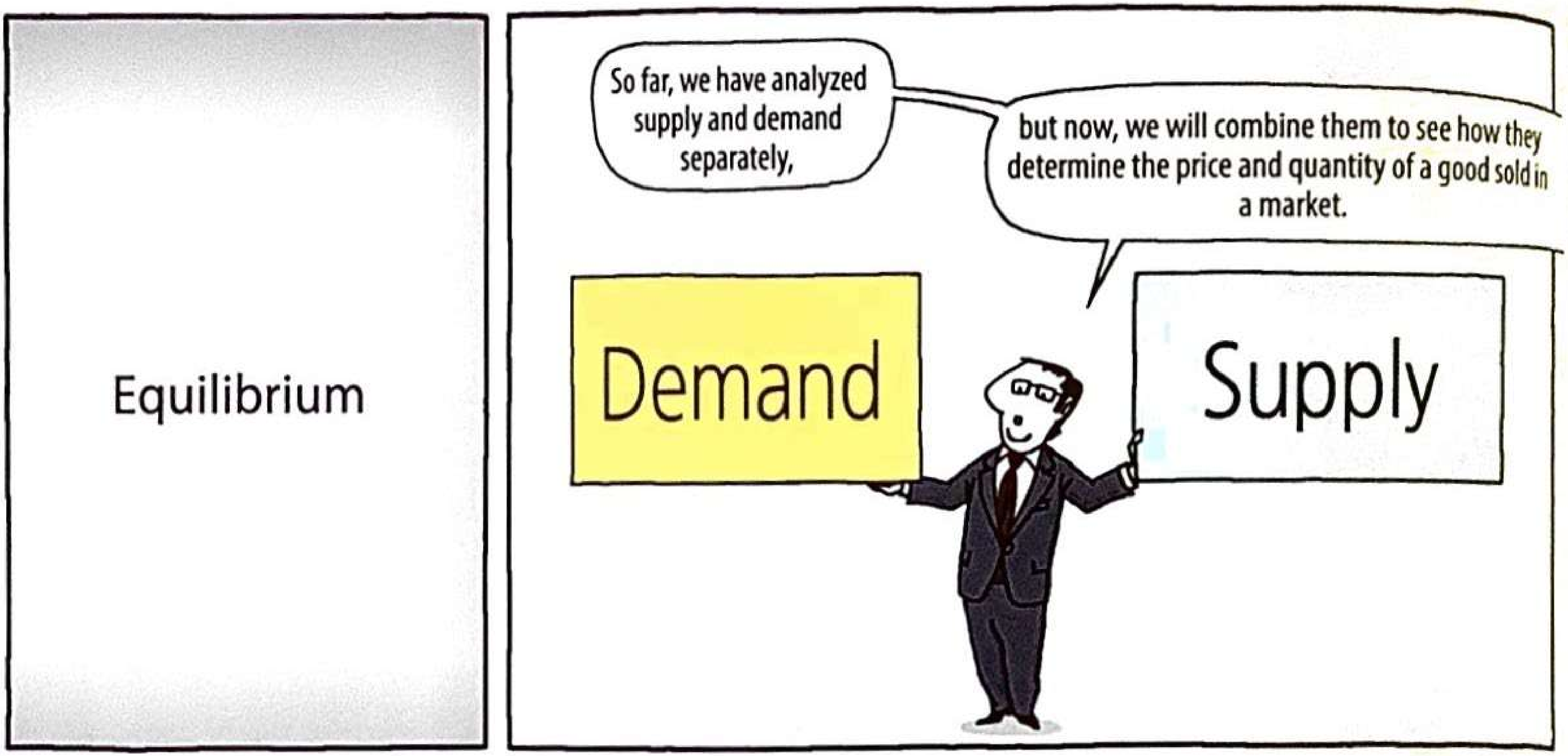
Equilibrium



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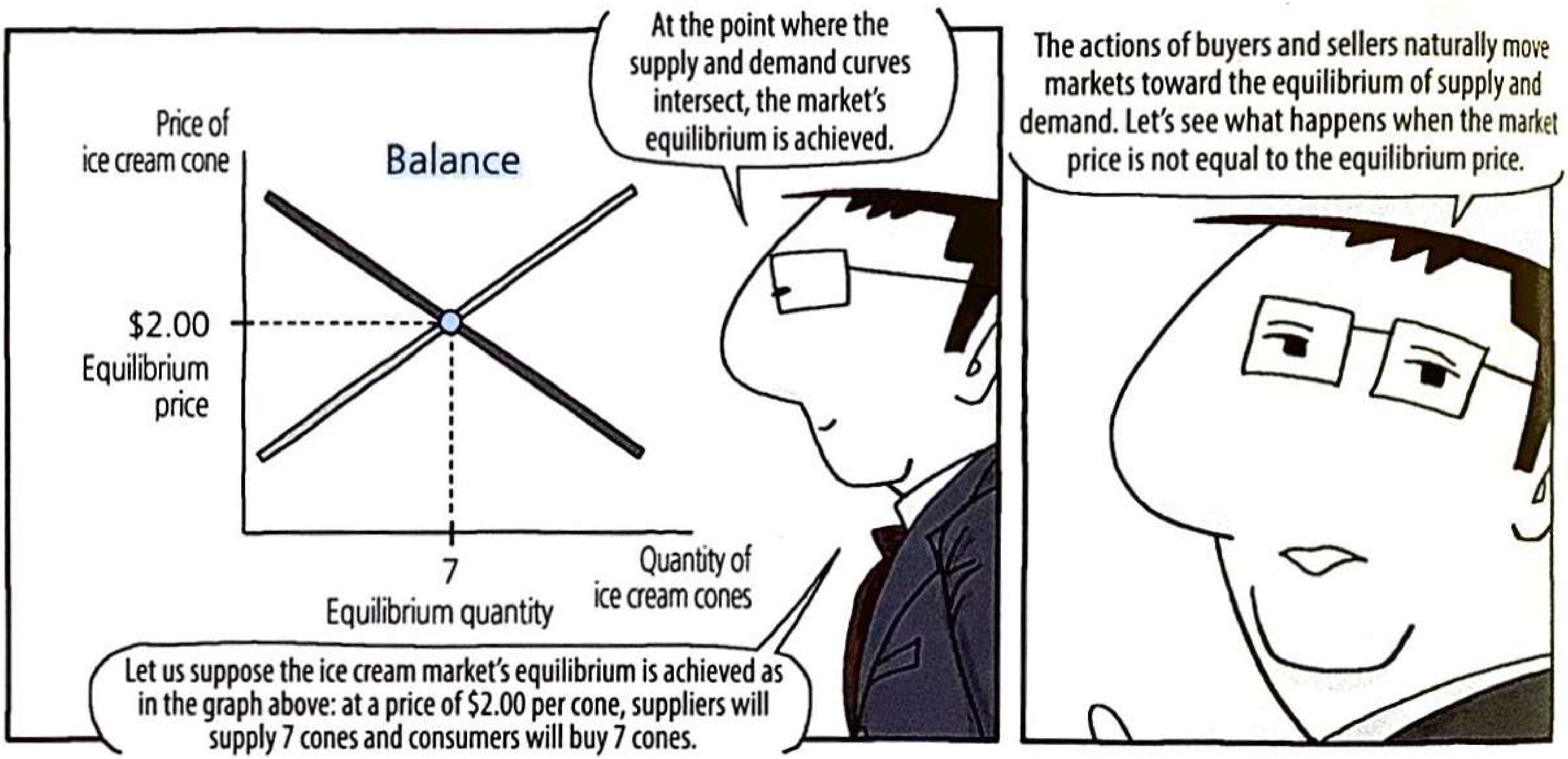

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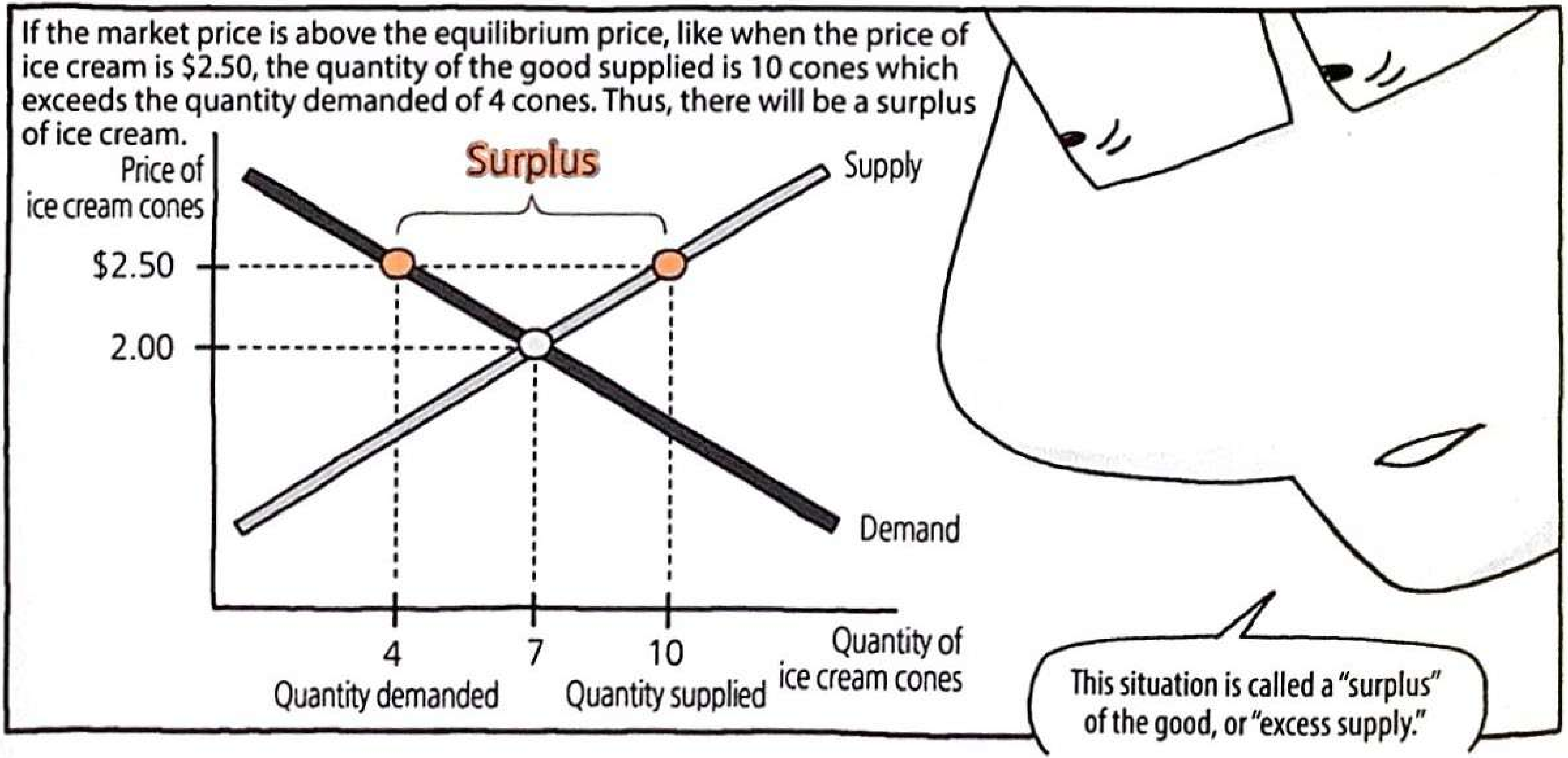

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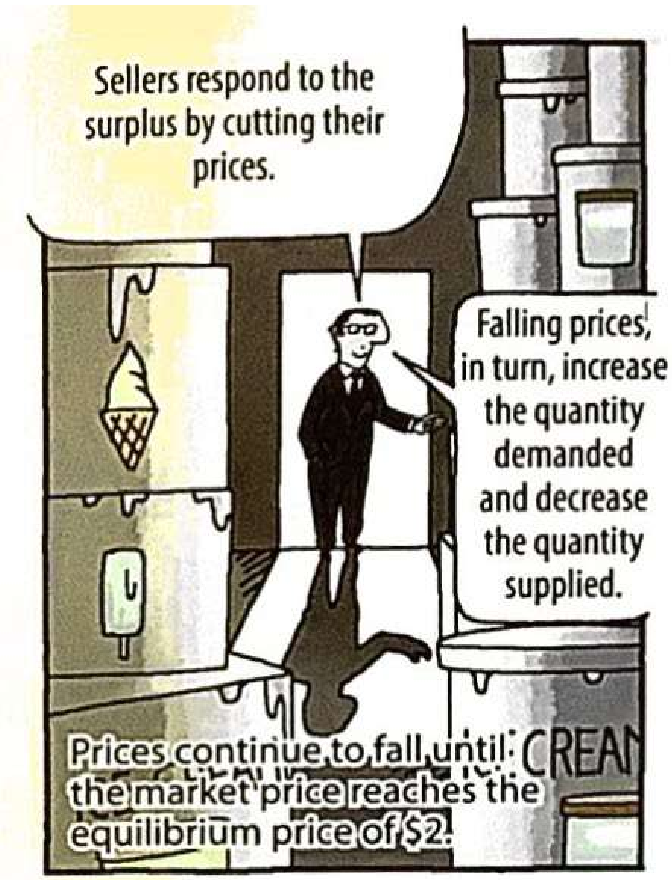
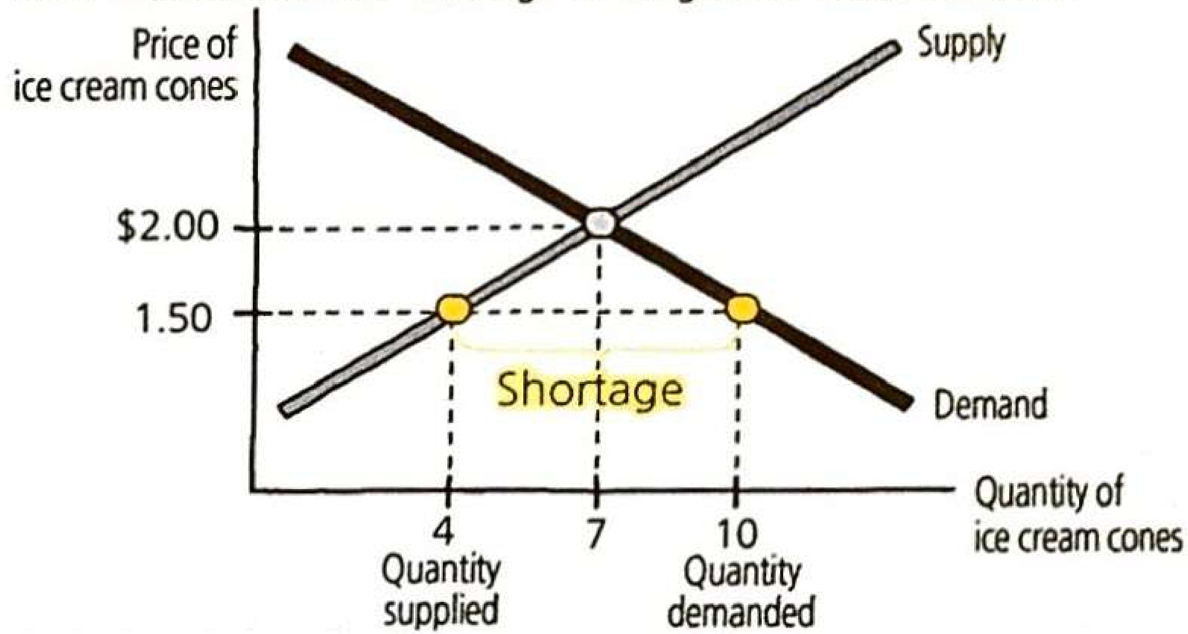


Let us suppose now that the market price is below the equilibrium price. When the price of ice cream cones is $1.50, the quantity of the cones supplied is 4 and the quantity demanded is 10. Thus, the quantity demanded exceeds the quantity supplied, and there will be a shortage of ice cream. This situation is called a "shortage" of the good or "excess demand".



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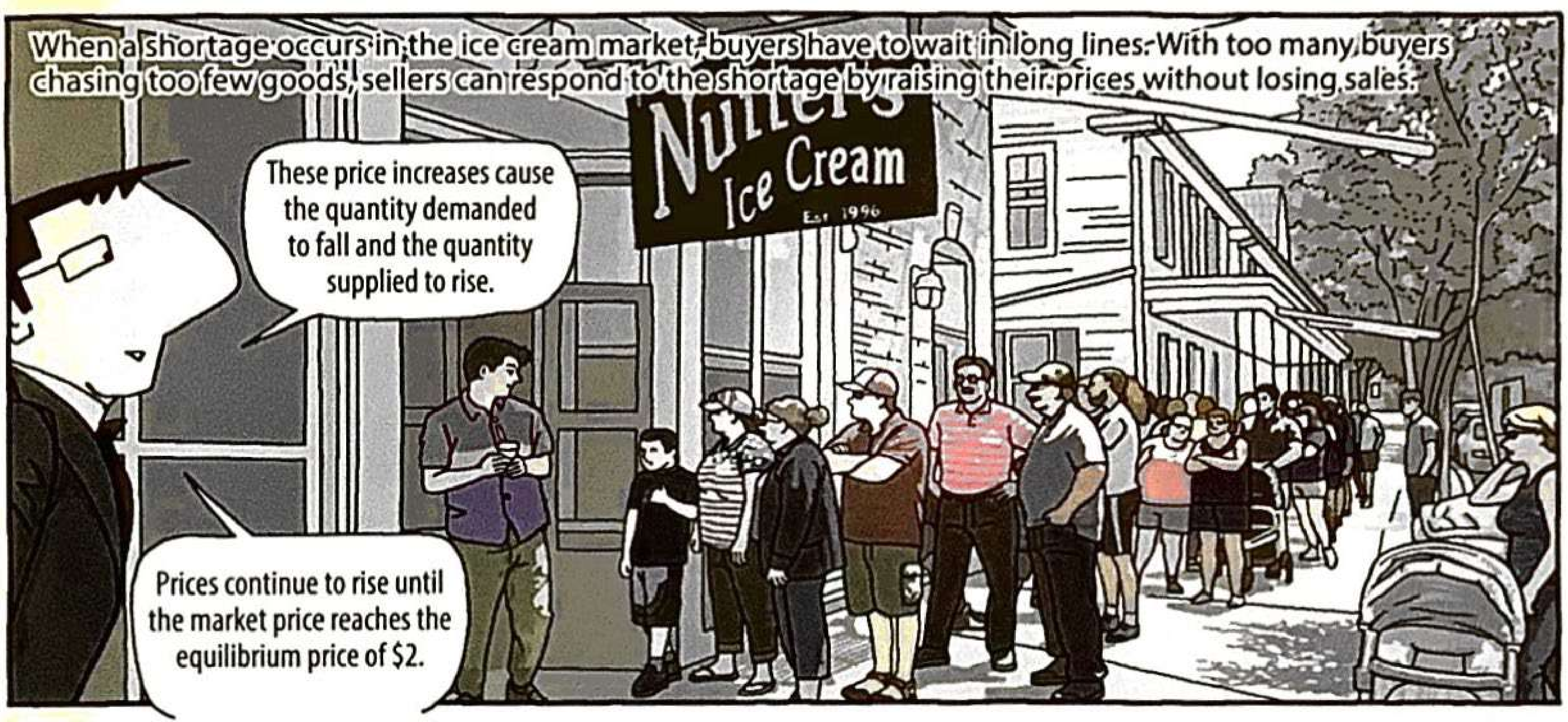

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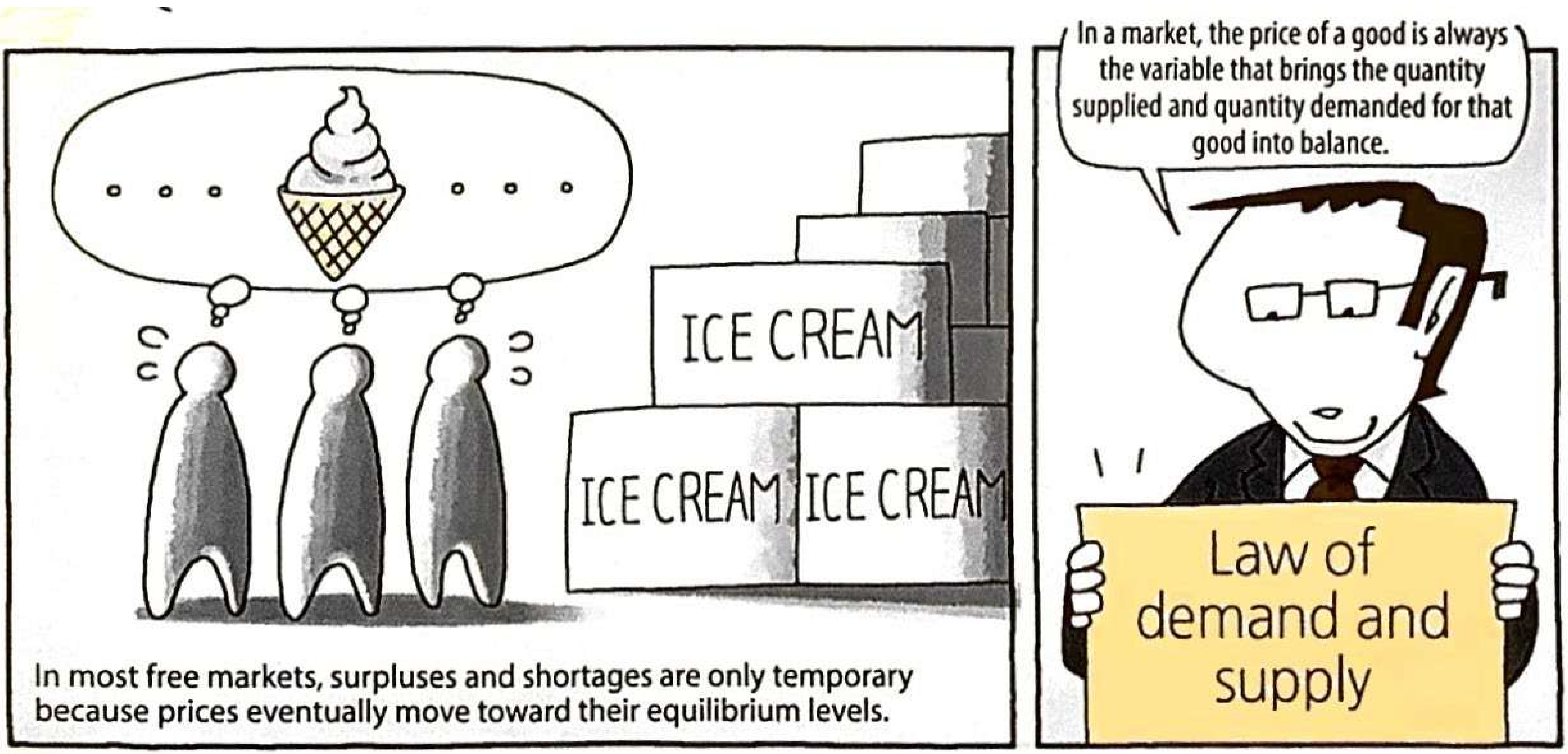
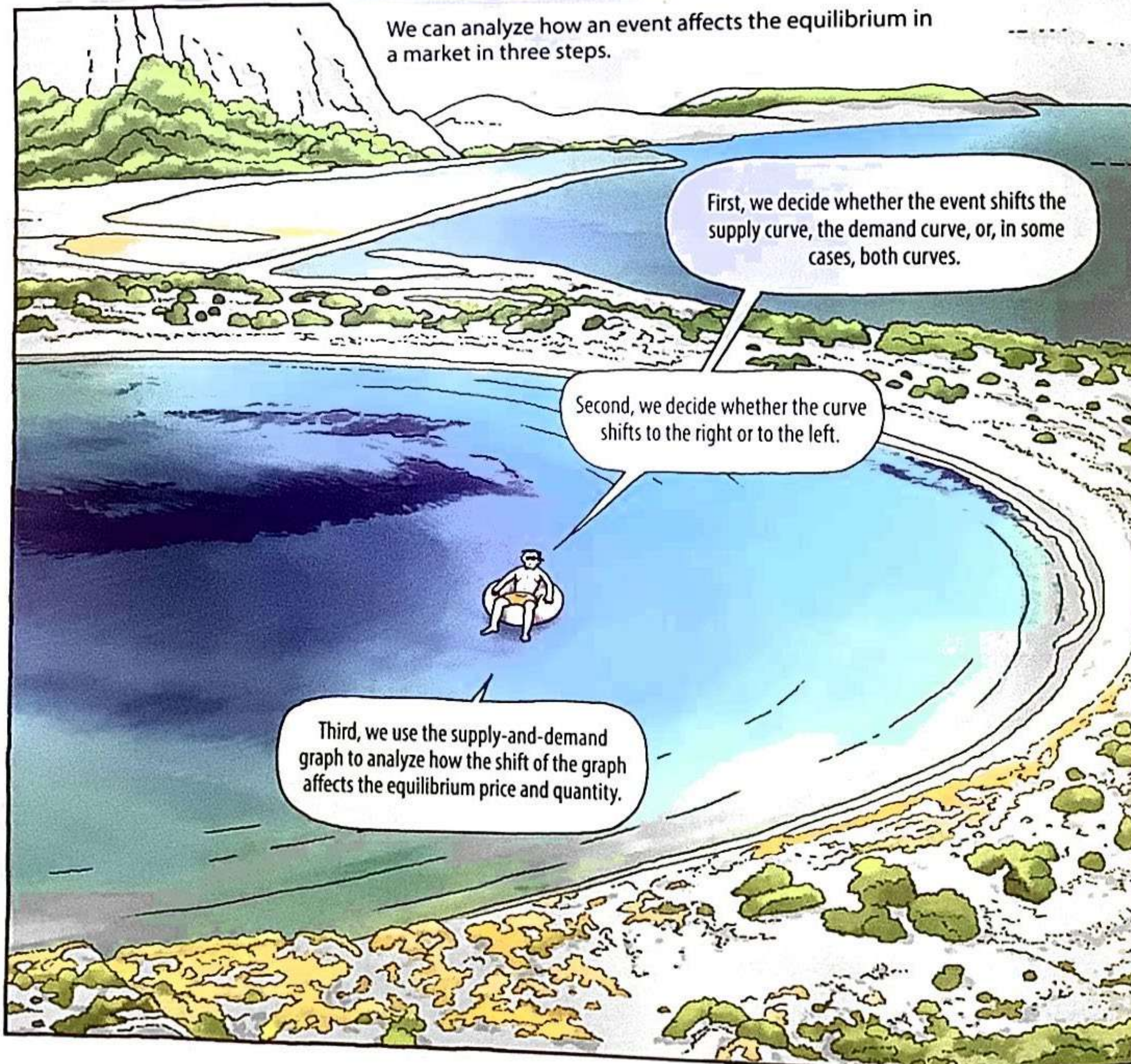
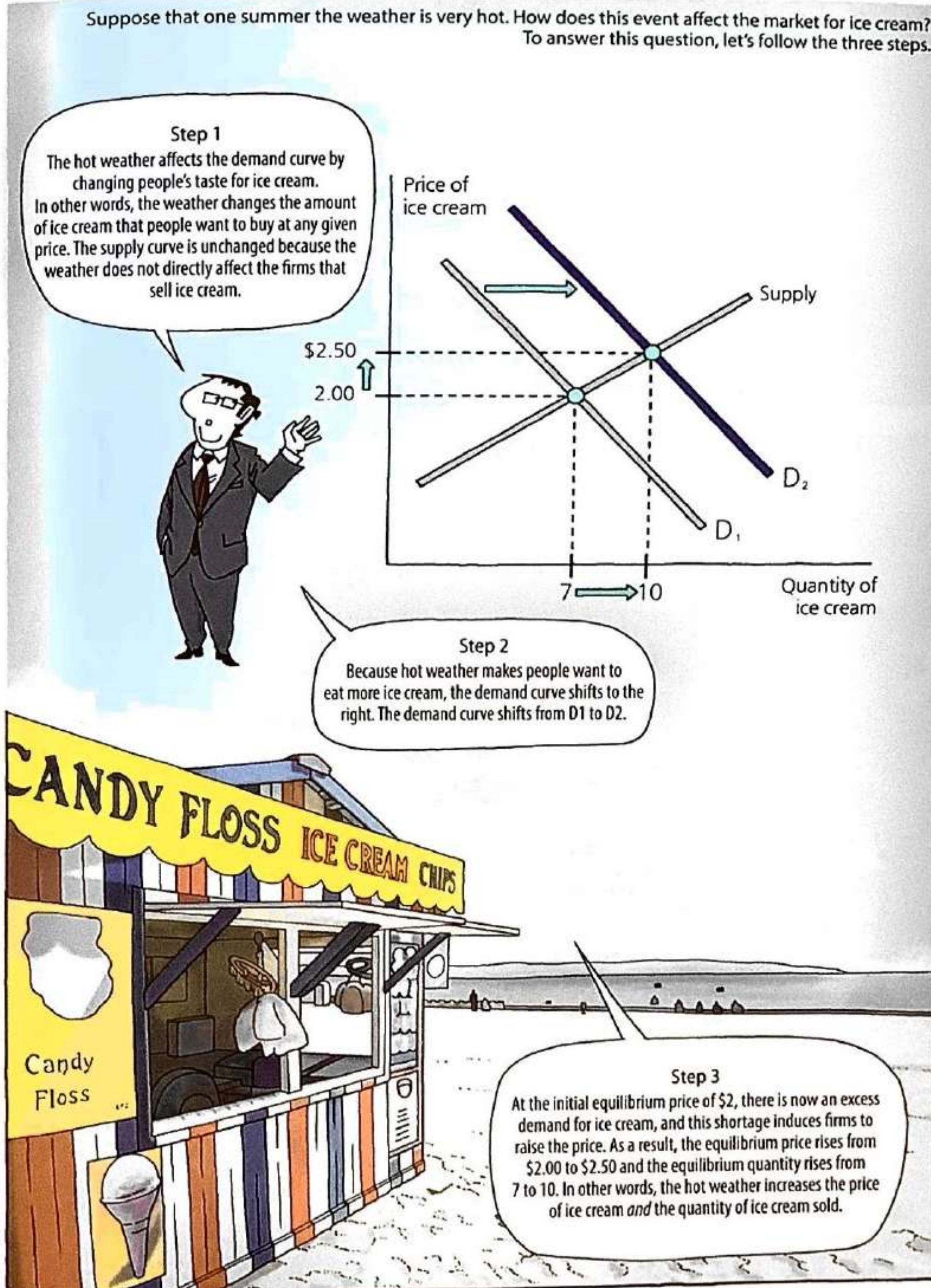


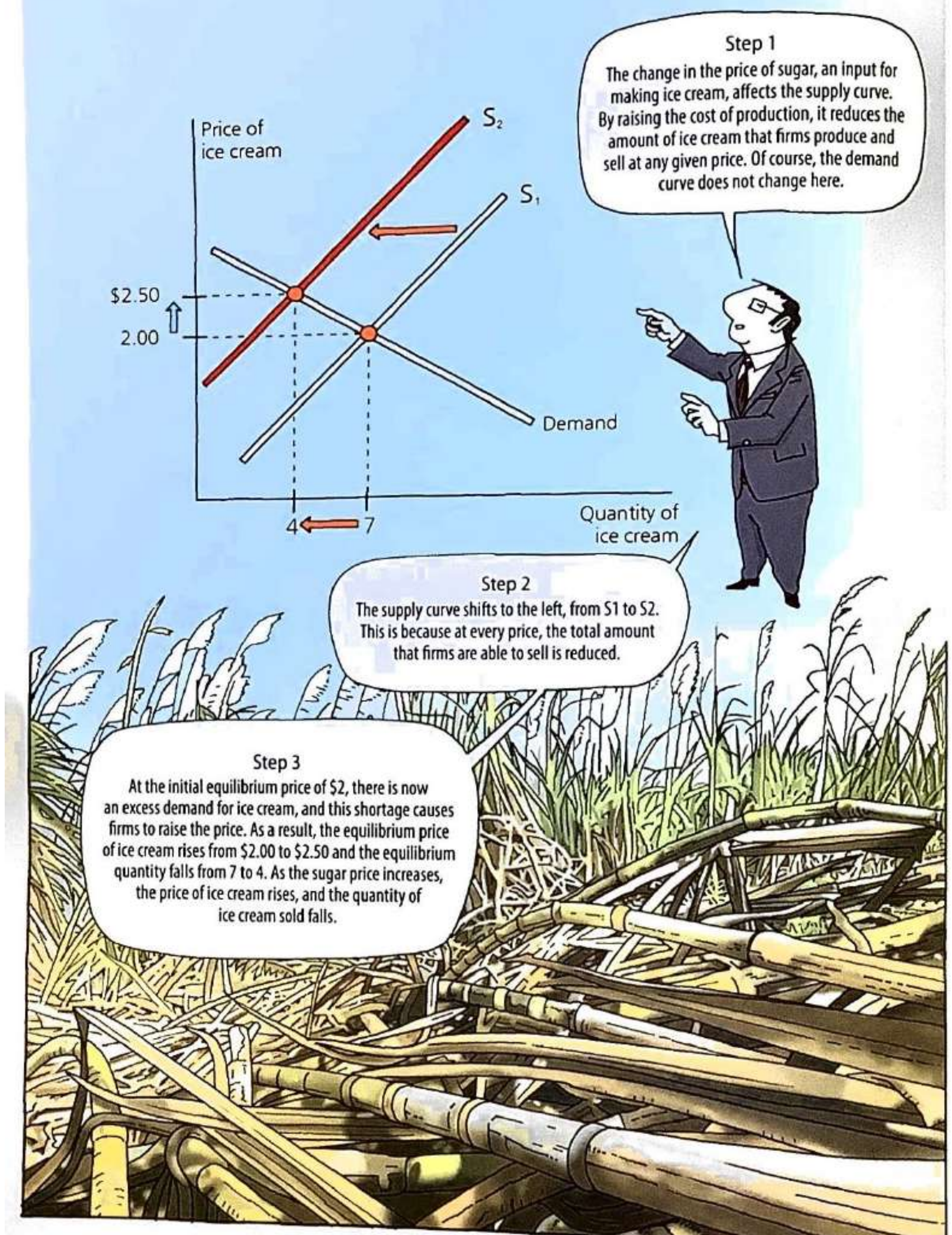
Three steps to analyze equilibrium changes


We can analyze how an event affects the equilibrium in a market in three steps.
First, we decide whether the event shifts the supply curve, the demand curve, or, in some cases, both curves.
Second, we decide whether the curve shifts to the right or to the left.
Third, we use the supply-and-demand graph to analyze how the shift of the graph affects the equilibrium price and quantity.

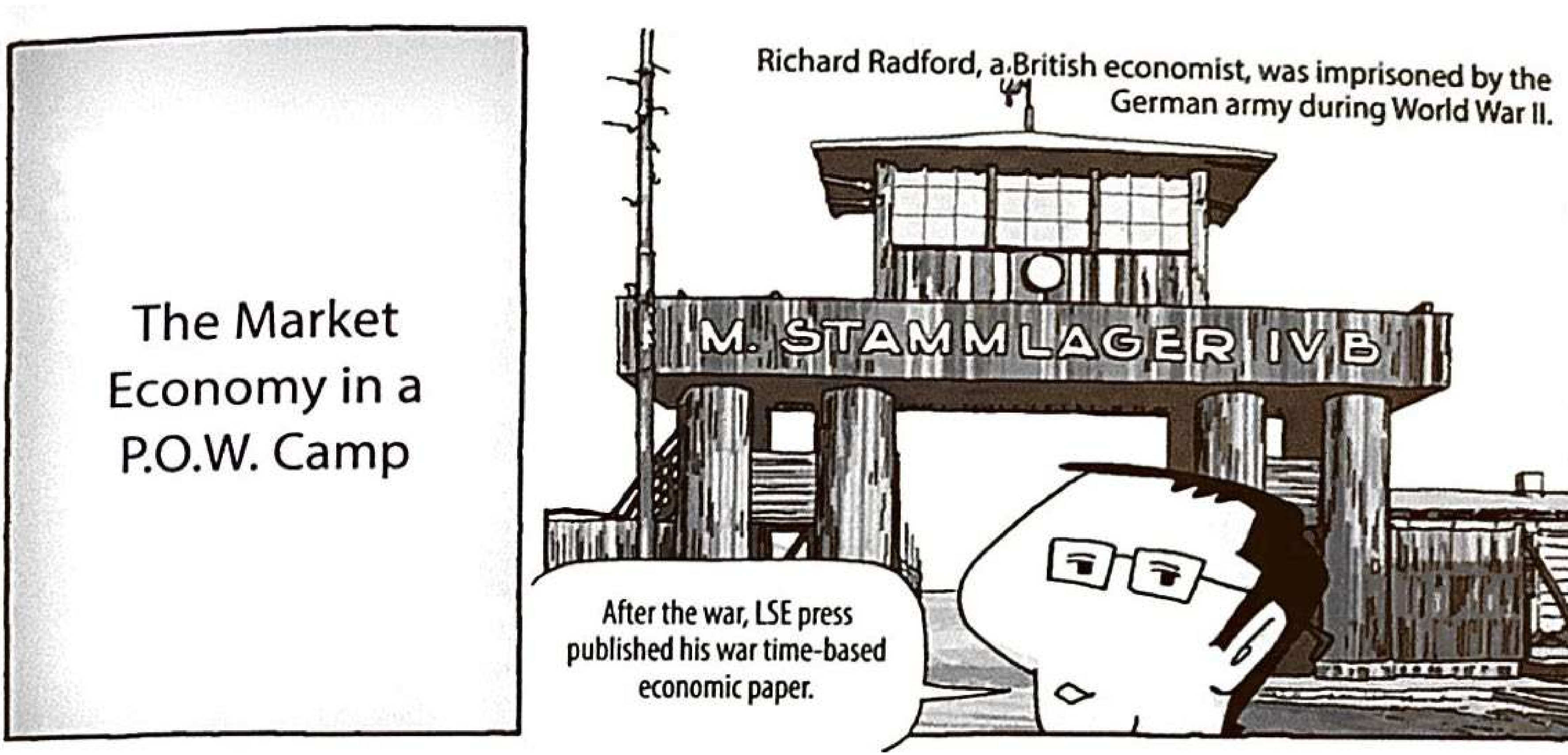


Suppose that one summer the weather is very hot. How does this event affect the market for ice cream? To answer this question, let's follow the three steps.
Step 1
The hot weather affects the demand curve by changing people's taste for ice cream. In other words, the weather changes the amount of ice cream that people want to buy at any given price. The supply curve is unchanged because the weather does not directly affect the firms that sell ice cream.
Price of ice cream
$2.50
2.00
Supply
D2
D1
7
10
Quantity of ice cream
Step 2
Because hot weather makes people want to eat more ice cream, the demand curve shifts to the right. The demand curve shifts from D1 to D2.
CANDY FLOSS ICE CREAM CHIPS
Candy Floss
Step 3
At the initial equilibrium price of $2, there is now an excess demand for ice cream, and this shortage induces firms to raise the price. As a result, the equilibrium price rises from $2.00 to $2.50 and the equilibrium quantity rises from 7 to 10. In other words, the hot weather increases the price of ice cream *and* the quantity of ice cream sold.

Now, let us suppose that during another summer, a hurricane destroys sugarcane crop and drives up the price of sugar. How does this event affect the market for ice cream? Once again, we follow the three steps.



The Market Economy in a P.O.W. Camp



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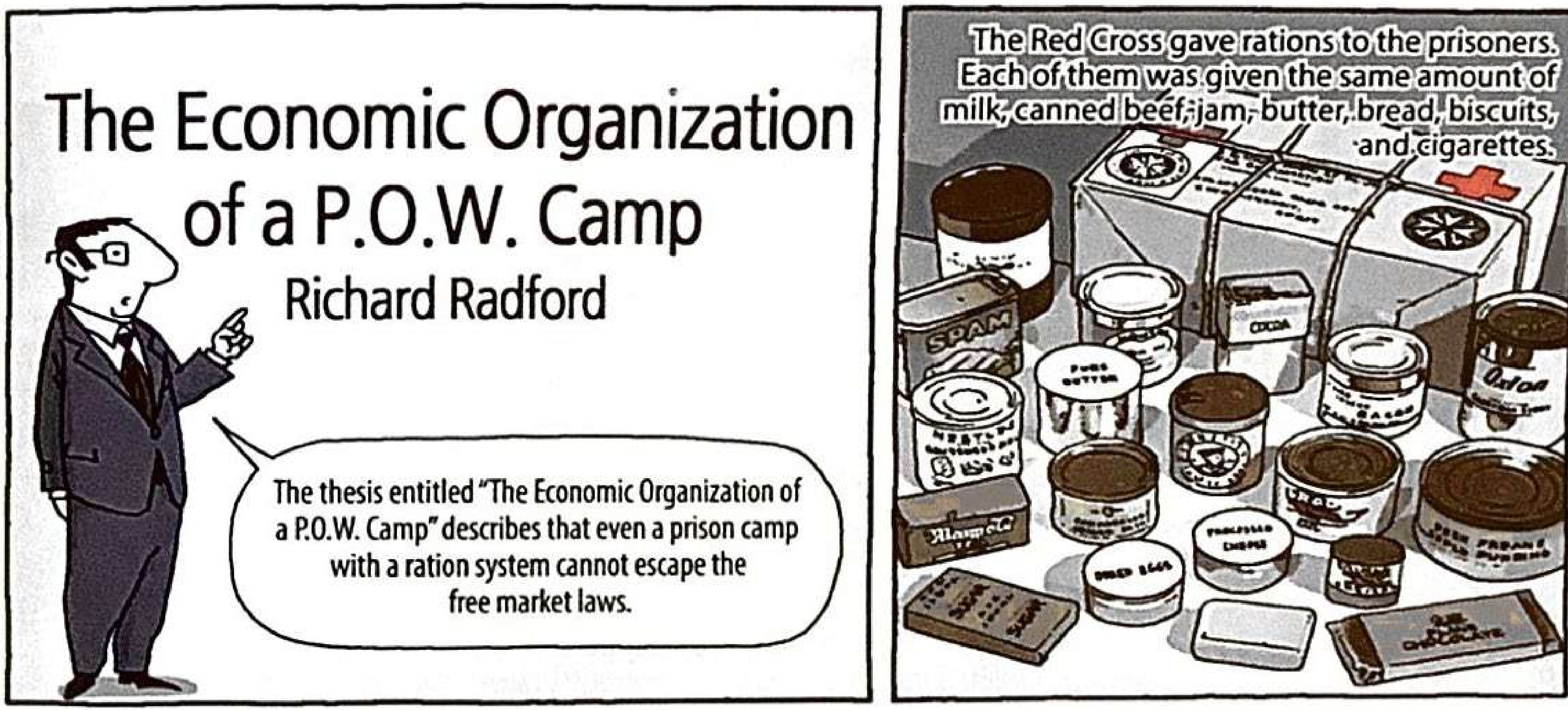

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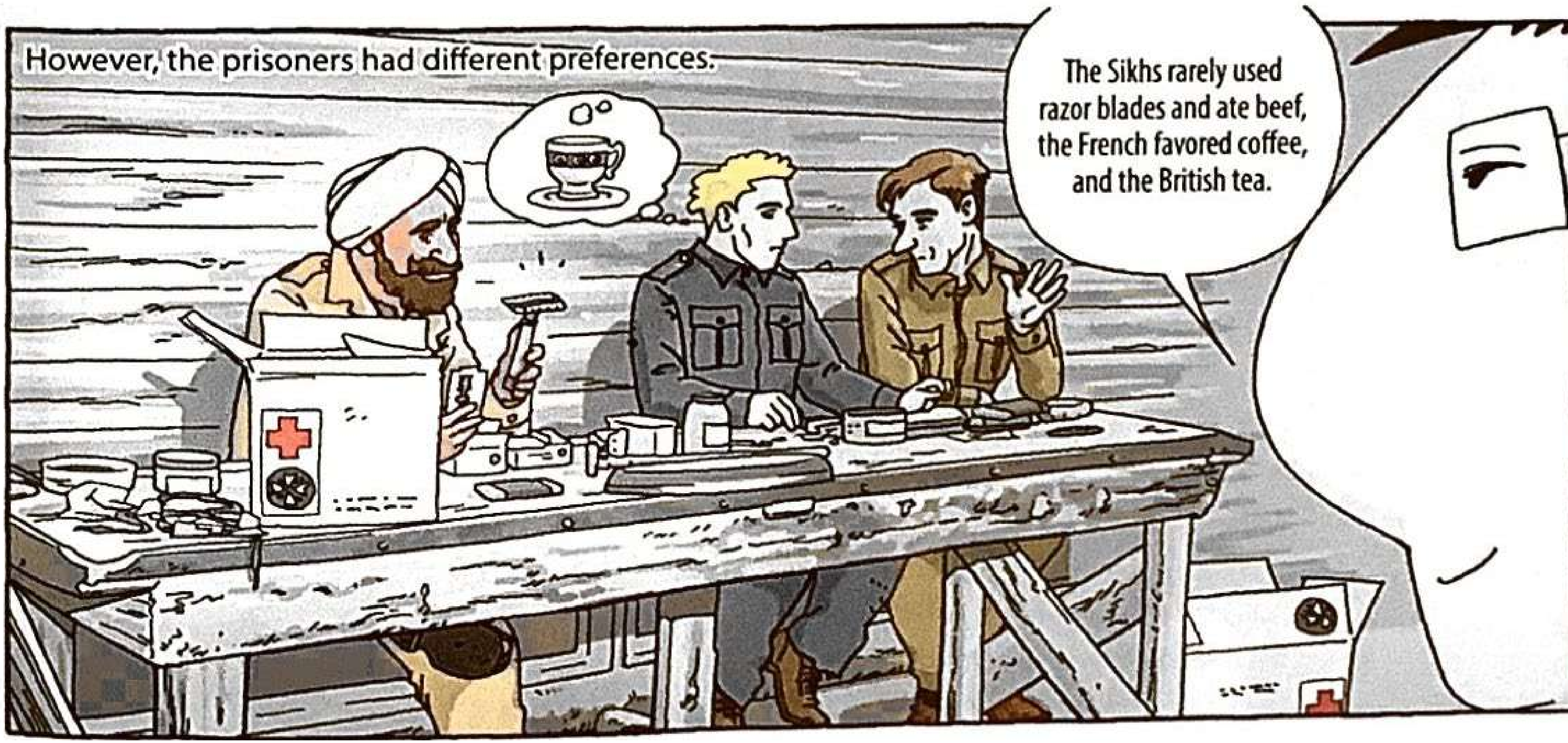

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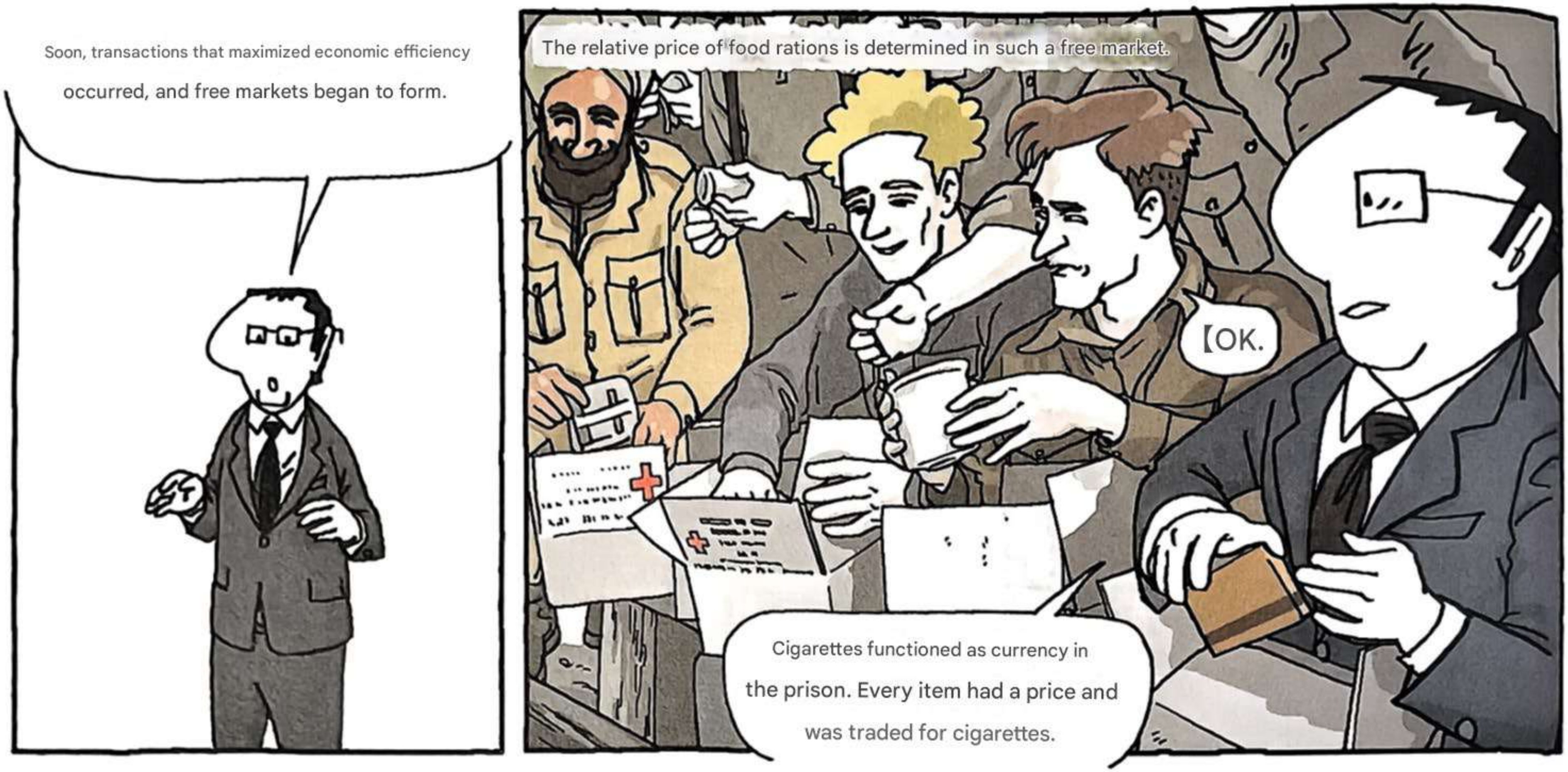

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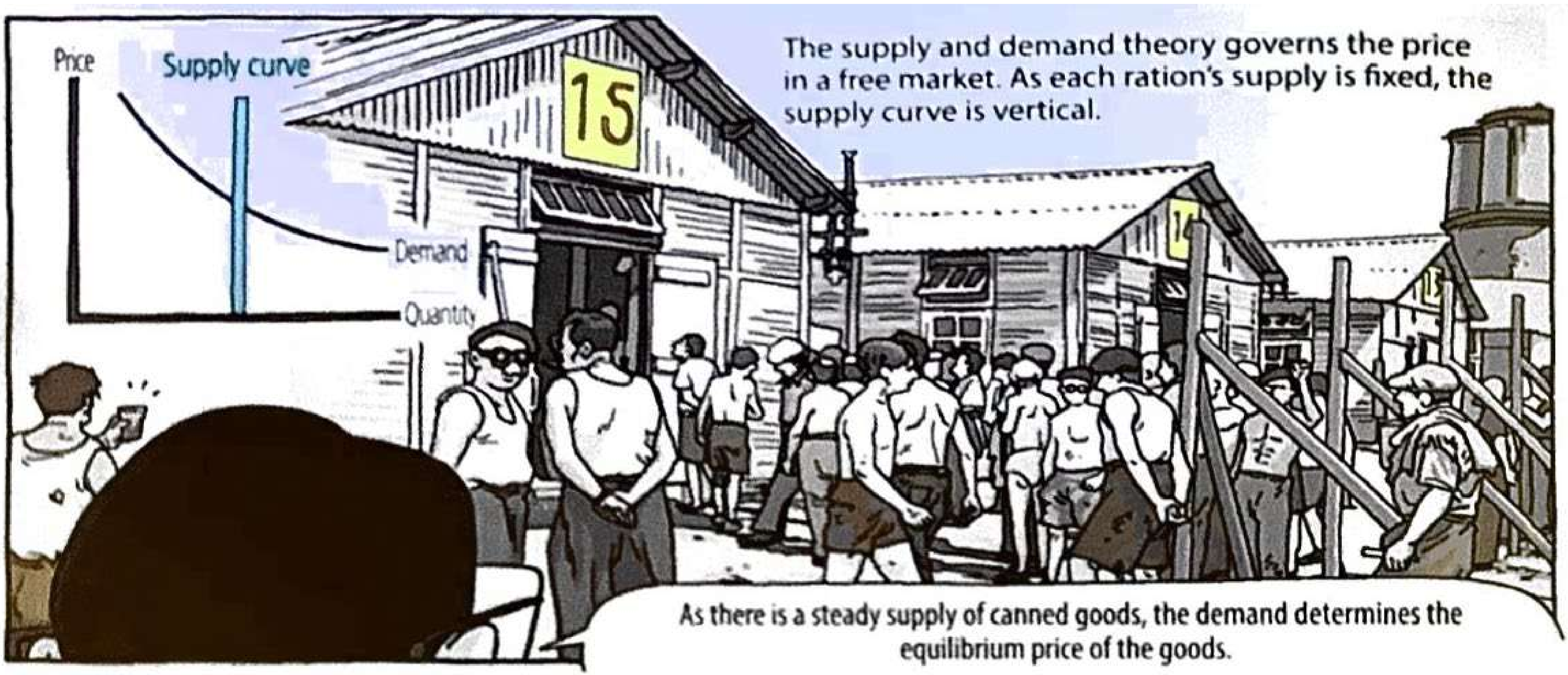

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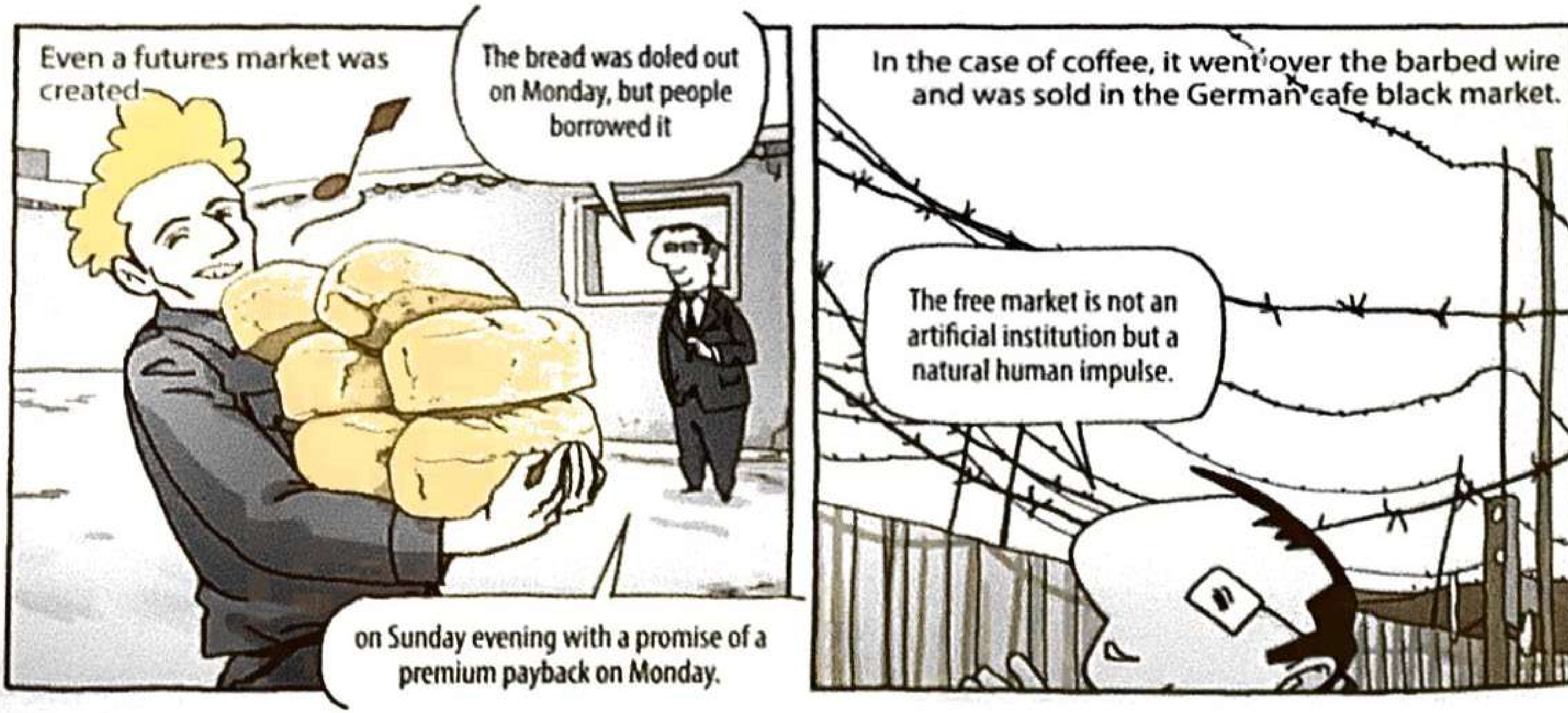

SUMMARY

- The point where the supply and demand curves intersect is called the market equilibrium.
  - The price at this intersection is referred to as the equilibrium price, and the corresponding quantity is known as the equilibrium quantity.
  - At the equilibrium price, the quantity supplied equals the quantity demanded.
- When the market price is higher than the equilibrium price, the quantity supplied exceeds the quantity demanded. This situation is referred to as a "surplus" or "excess supply."
- When a surplus occurs in the market, the price falls, which in turn increases the quantity demanded and reduces the quantity supplied. This process continues until the price reaches the equilibrium level.

SUMMARY

- When the market price is lower than the equilibrium price, the quantity demanded exceeds the quantity supplied. This situation is called a "shortage" or "excess demand."
- When a shortage occurs, buyers may have to wait in long lines, and sellers will raise prices. As the price increases, the quantity demanded decreases, and the quantity supplied rises until the market reaches equilibrium.
- These adjustments are reflected as movements along the supply and demand curves.

SUMMARY

- The adjustment of any good's price to balance the quantity supplied and quantity demanded is known as the law of supply and demand. The table below shows how price and quantity change when either supply or demand shifts.

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

思考题

1. Which of the following changes will NOT shift the demand curve for hamburgers?

a. The price of hot dogs

b. The price of hamburgers

c. The price of hamburger desserts

d. The income of hamburger consumers

思考题

2. An increase in ________ will cause a shift along a given demand curve, known as a change in ________.

a. Supply, Demand

b. Supply, Quantity Demanded

c. Demand, Supply

d. Demand, Quantity Supplied

思考题

3. Movie tickets and DVDs are substitutes. What will happen to the movie ticket market if the price of DVDs rises?

a. The supply curve shifts to the left.

b. The supply curve shifts to the right.

c. The demand curve shifts to the left.

d. The demand curve shifts to the right.

思考题

4. The newly discovered large crude oil reserves will shift the gasoline price curve, leading to a price equilibrium that is ______.

a. Supply, higher

b. Supply, lower

c. Demand, higher

d. Demand, lower

思考题

5. If the economy falls into recession and incomes decline, what will happen to the market for lower-end goods?

a. Both prices and quantities will rise.

b. Both prices and quantities will fall.

c. Prices will rise, and quantities will fall.

d. Prices will fall, and quantities will increase.

思考题

6. Which of the following could lead to an increase in the equilibrium price of jelly and a decrease in its equilibrium quantity sold?

a. An increase in the price of peanut butter, a complement to jam.

b. An increase in the price of marshmallows, a substitute for jam.

c. An increase in the price of grapes, a raw material for jam.

d. An increase in consumer income, provided jam is a normal good.

思考题

7. Is the statement "Increased demand for laptops will increase the quantity demanded, but will not increase the quantity supplied" true or false?

思考题

8. Ketchup and hot dogs are complementary products. What would happen to the tomato, tomato juice, and orange juice markets if the price of hot dogs increased?

思考题

9. Please explain: Over the past 30 years, technological advancements have reduced the cost of computer chips. How do you think this has affected the computer market? What about computer software? What about typewriters?