
SUPPLY & DEMAND
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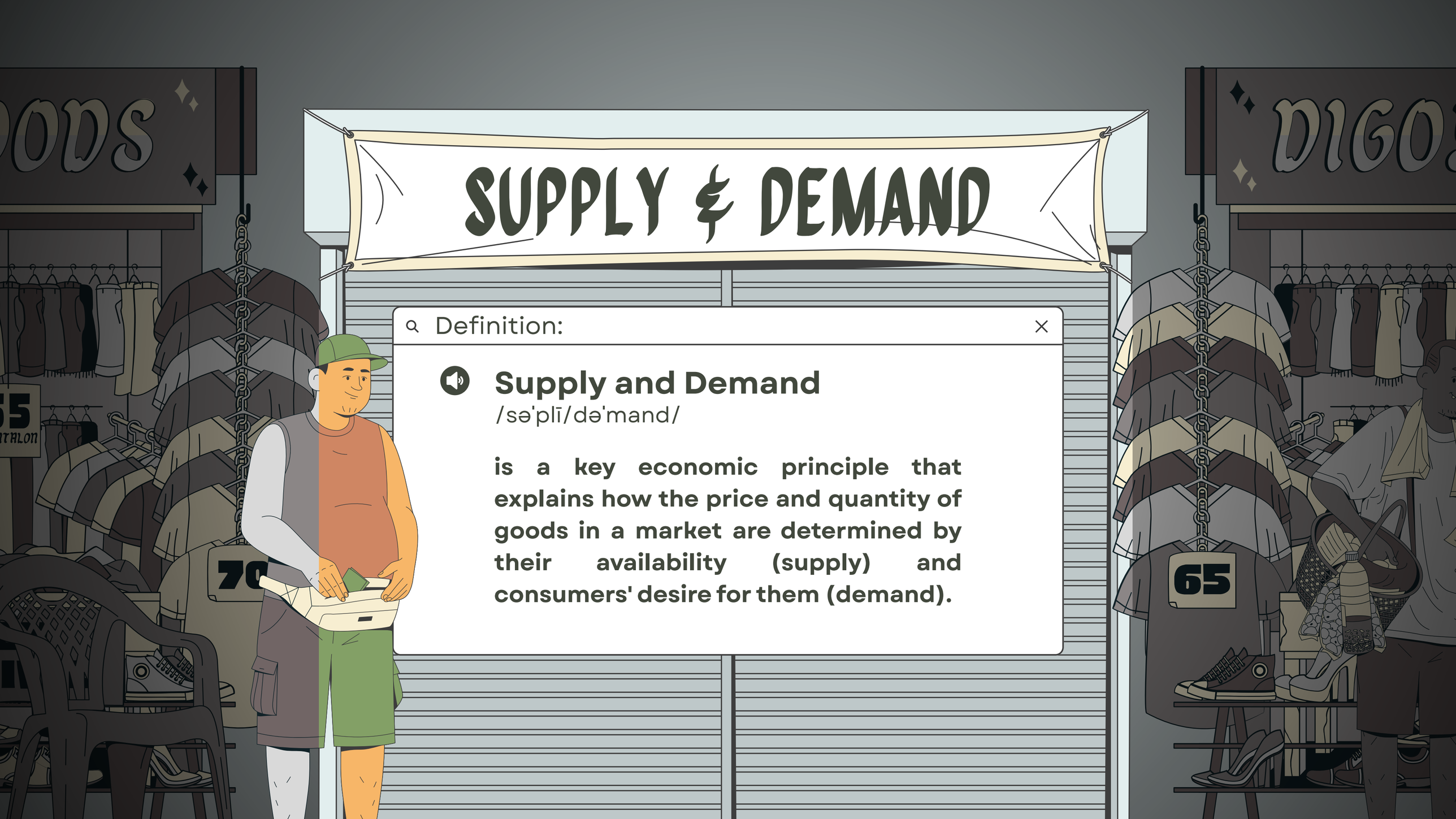

SUPPLY & DEMAND
Definition:
Supply and Demand
/səˈplī/dəˈmand/
is a key economic principle that explains how the price and quantity of goods in a market are determined by their availability (supply) and consumers' desire for them (demand).

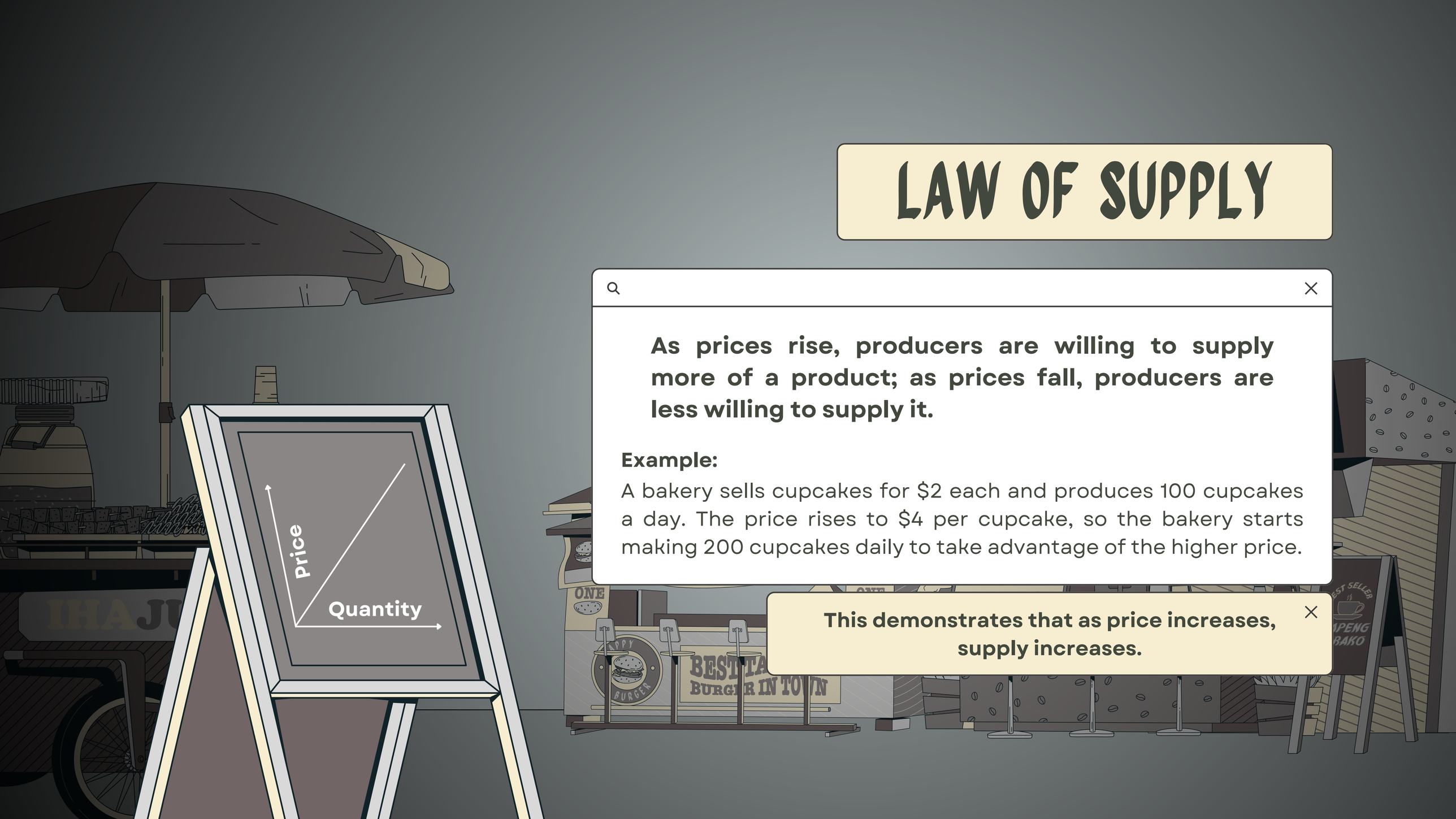
LAW OF SUPPLY

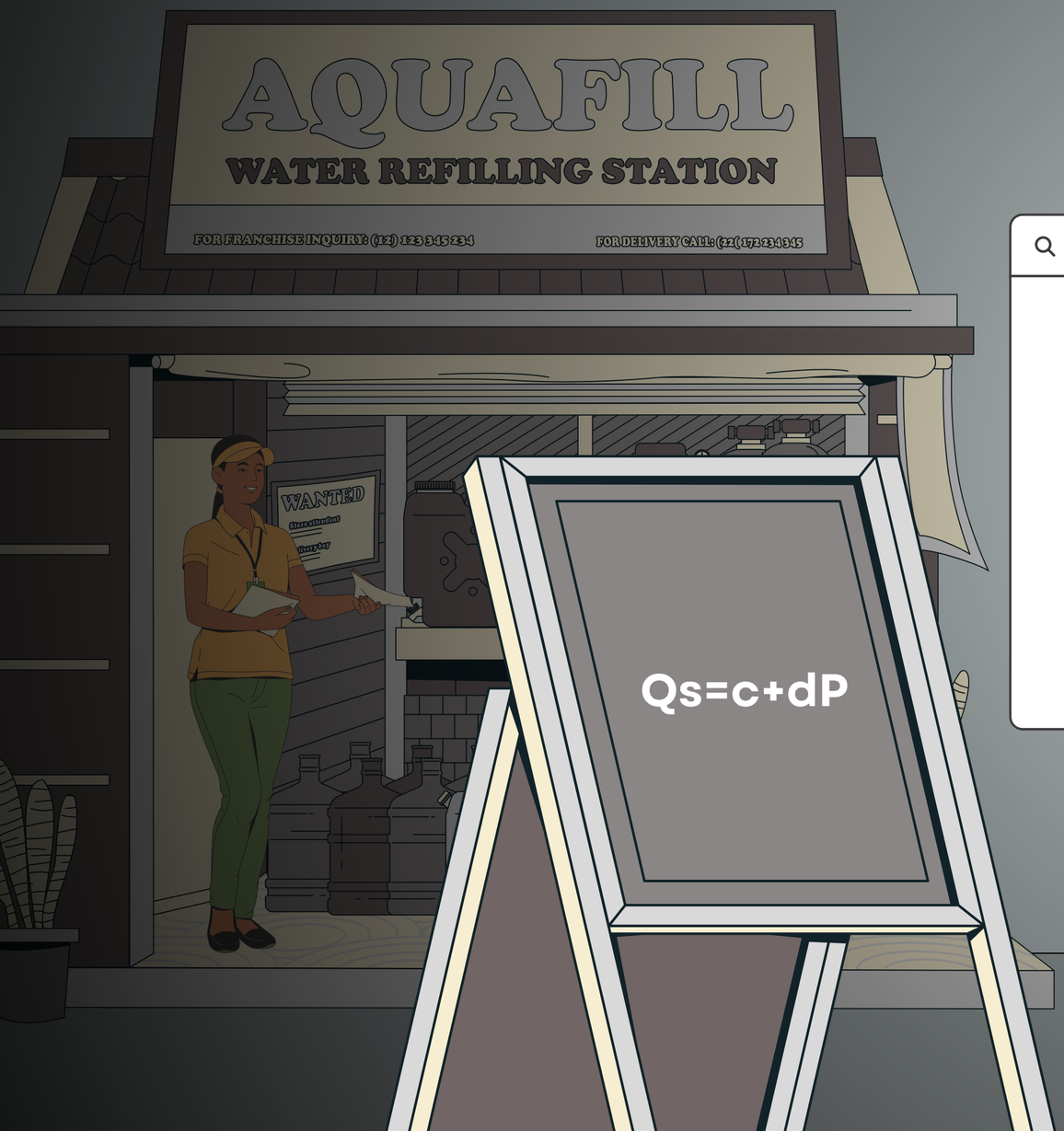
As prices rise, producers are willing to supply more of a product; as prices fall, producers are less willing to supply it.

Example:

A bakery sells cupcakes for $2 each and produces 100 cupcakes a day. The price rises to $4 per cupcake, so the bakery starts making 200 cupcakes daily to take advantage of the higher price.

This demonstrates that as price increases, supply increases.





SUPPLY FUNCTION

- **Qs = Quantity supplied**
- **c = Minimum quantity supplied when price is 0**
- **d = Sensitivity of supply to price changes**
- **P = Price of the good**

Example:

If Qs=20+3P, and the price is $10,

Qs=20+3(10)=50

So, 50 units will be supplied at a price of $10.

LAW OF DEMAND

As prices rise, people tend to buy less of a product; as prices fall, people tend to buy more.

Example:

A new smartphone is released for $1,500, and few people buy it. The company lowers the price to $1,000, and suddenly, more customers start purchasing it.

This shows that as price decreases, demand increases.

DEMAND FUNCTION

- **Qd = Quantity demanded**
- **a = Minimum quantity demanded when price is 0**
- **b = Sensitivity of demand to price changes**
- **P = Price of the good**

Example:

If Qd=100-2P, and the price is $20,

Qd=100-2(20)=60

So, 60 units will be demanded at a price of $20.

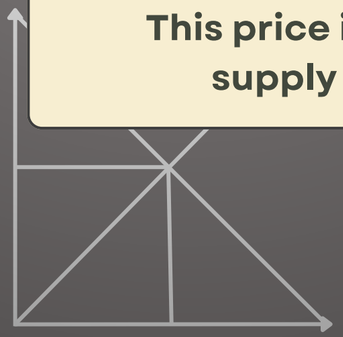
MARKET EQUILIBRIUM

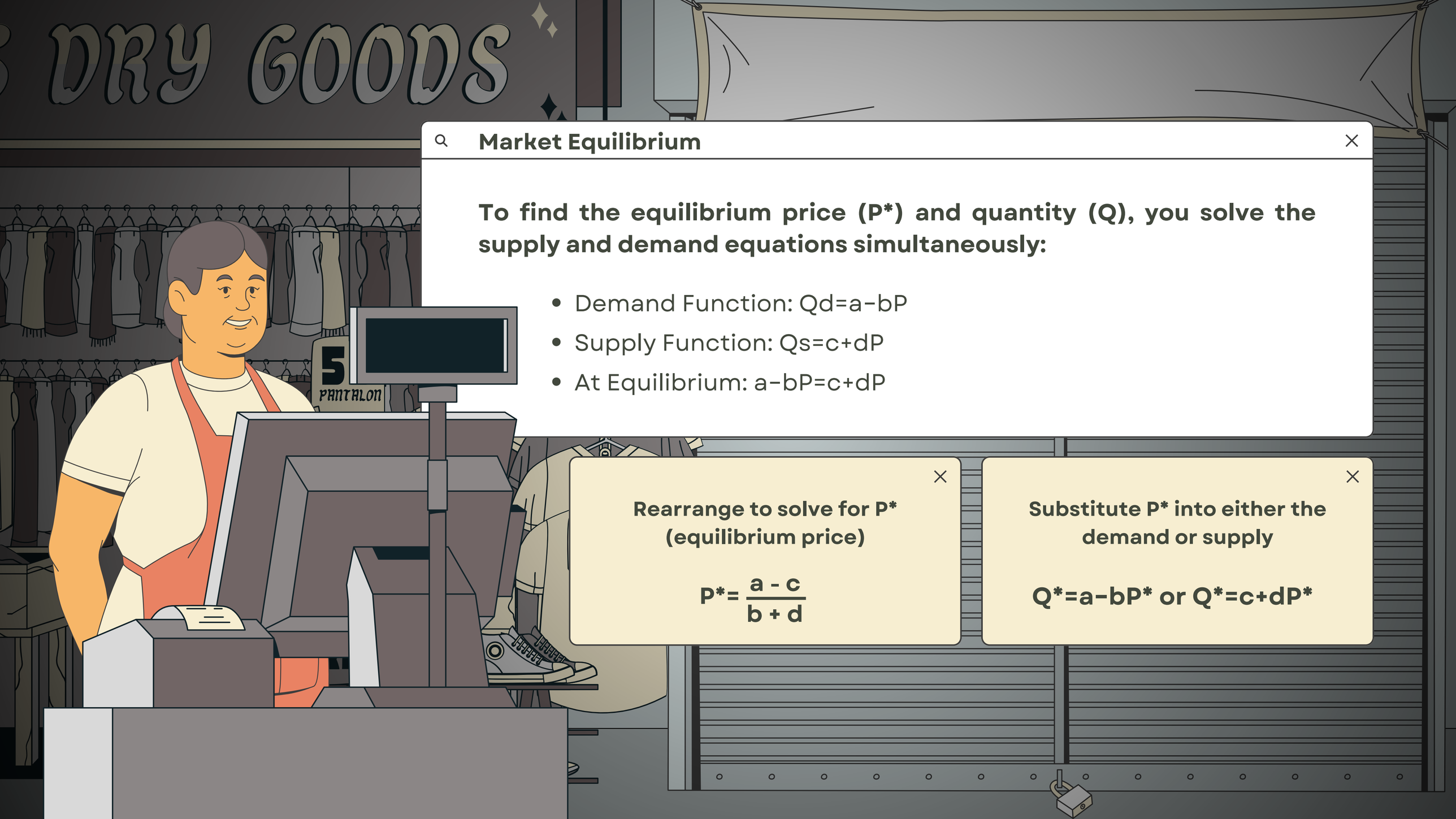
The point where supply and demand meet is called equilibrium. At this price, the quantity supplied equals the quantity demanded, meaning there is neither a surplus nor a shortage.

Example:

A store sells sneakers at $50 per pair, matching supply and demand at 100 pairs per week. Raising the price to $70 creates a surplus, while dropping it to $30 causes a shortage.

This price is the equilibrium price, where supply and demand are balanced.





Market Equilibrium

To find the equilibrium price (P*) and quantity (Q), you solve the supply and demand equations simultaneously:

- Demand Function: $Qd=a-bP$
- Supply Function: $Qs=c+dP$
- At Equilibrium: $a-bP=c+dP$

Rearrange to solve for P* (equilibrium price)

$$P^* = \frac{a - c}{b + d}$$

Substitute P* into either the demand or supply

$$Q^*=a-bP^* \text{ or } Q^*=c+dP^*$$

FOUR MARKET BEHAVIORS

Market behavior refers to how supply and demand interact to determine prices and product availability. The four key behaviors are:

- Equilibrium – Supply equals demand, stabilizing prices.
- Surplus – Excess supply leads to price drops.
- Shortage – High demand with low supply raises prices.
- Shifts – External factors change supply or demand, affecting prices.