



# The Ultimate Unit 5 Cheat Sheet

Everything you need to know about factor markets, supply and demand in labor markets, and monopsonistic firms

## Factor Markets

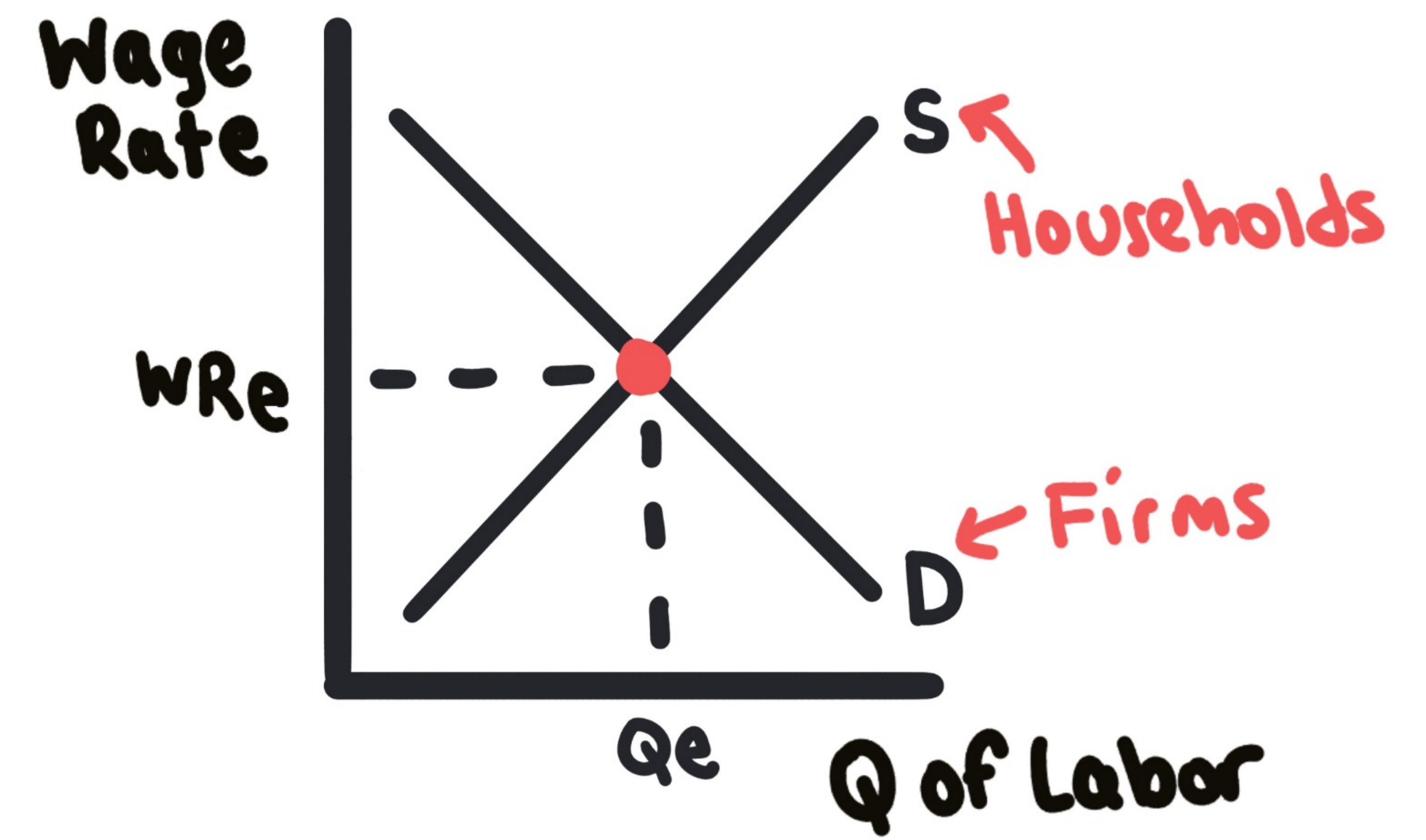
**Factors of Production:** the resources used to produce goods and services; land, labor, capital, and entrepreneurship.

**Factor Market:** the market where the factors of production (resources) are bought and sold.

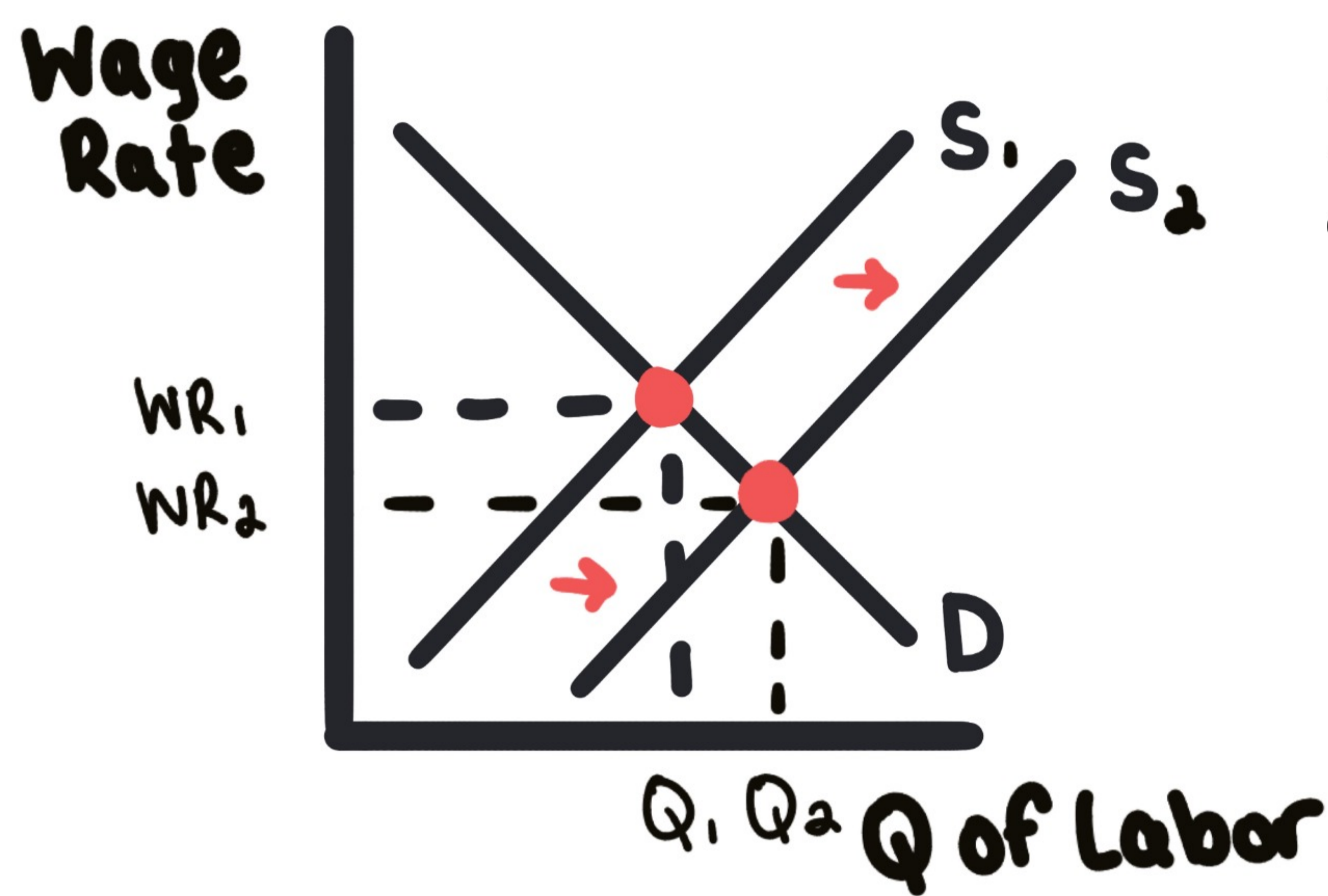
- Households SUPPLY their labor; quantity supplied increases as wage increases
- Firms DEMAND labor; quantity demanded decreases as wage increases

**Derived Demand:** the concept that the demand for a resource is determined by the demand for the good or service that resource produces.

- EX: people travel by air less often, so there is less demand for pilots



## Changes in Factor Supply & Demand

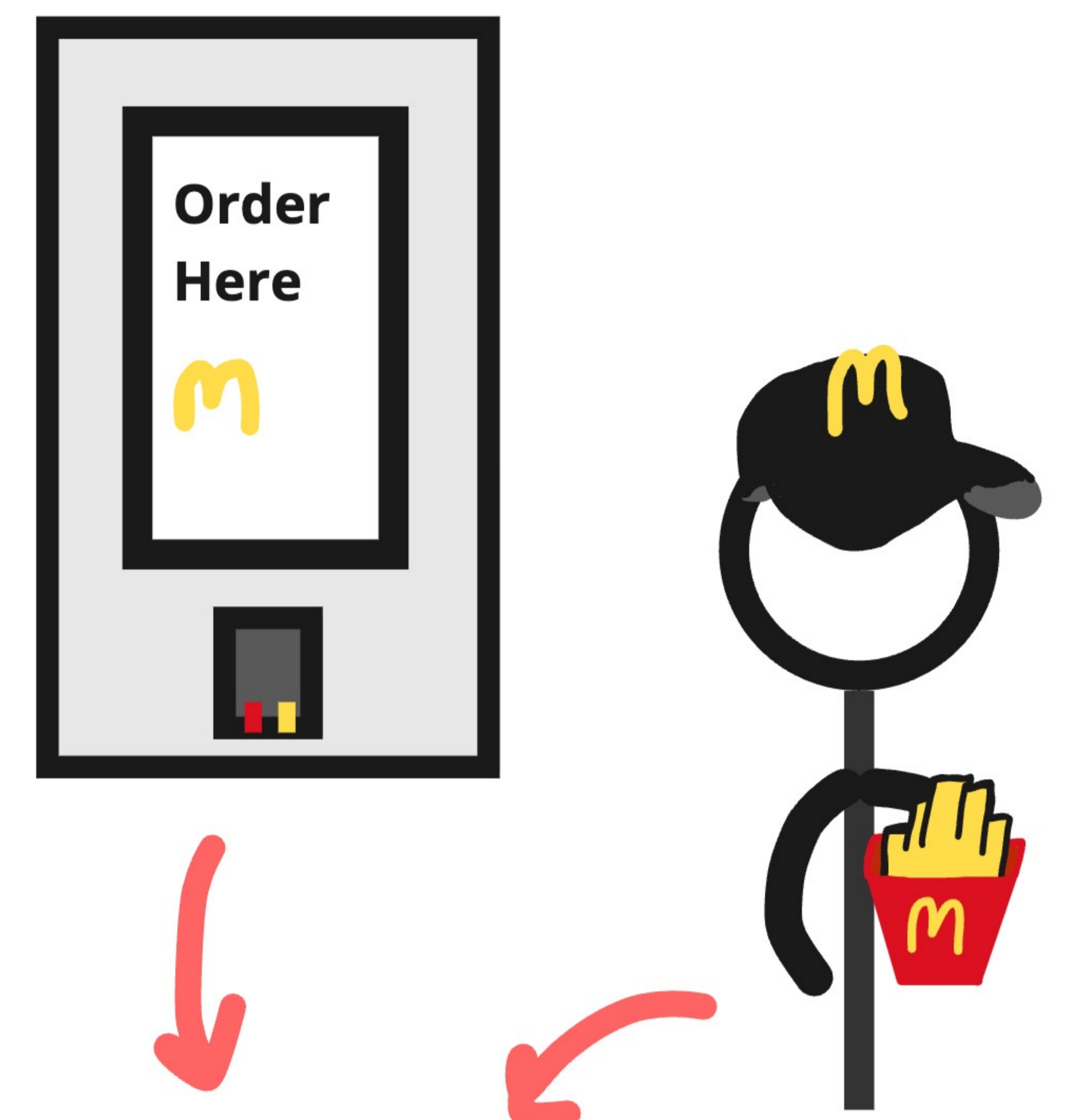


**Labor supply can shift due to changes in...**

1. Population
2. Worker preferences
3. Education level
4. Government regulations

**Labor demand can shift due to changes in...**

1. Price of the Product ( $P \uparrow \rightarrow MRP \uparrow$ ).
2. Productivity ( $MP \uparrow \rightarrow MRP \uparrow$ ).
3. Change in Price of Related Resources (Substitutes/Complements).



As self-order kiosks become cheaper and more effective, demand for human cashiers decreases

## Perfect Competition & Profit Maximization

**Marginal Revenue Product (MRP):** the additional revenue generated by hiring one more unit of a resource (e.g., one more worker).

$$\rightarrow MRP = MR \times MP$$

- Increases at first as workers become more productive due to specialization
- Decreases eventually due to law of diminishing marginal returns

can increase or decrease depending on demand for the product

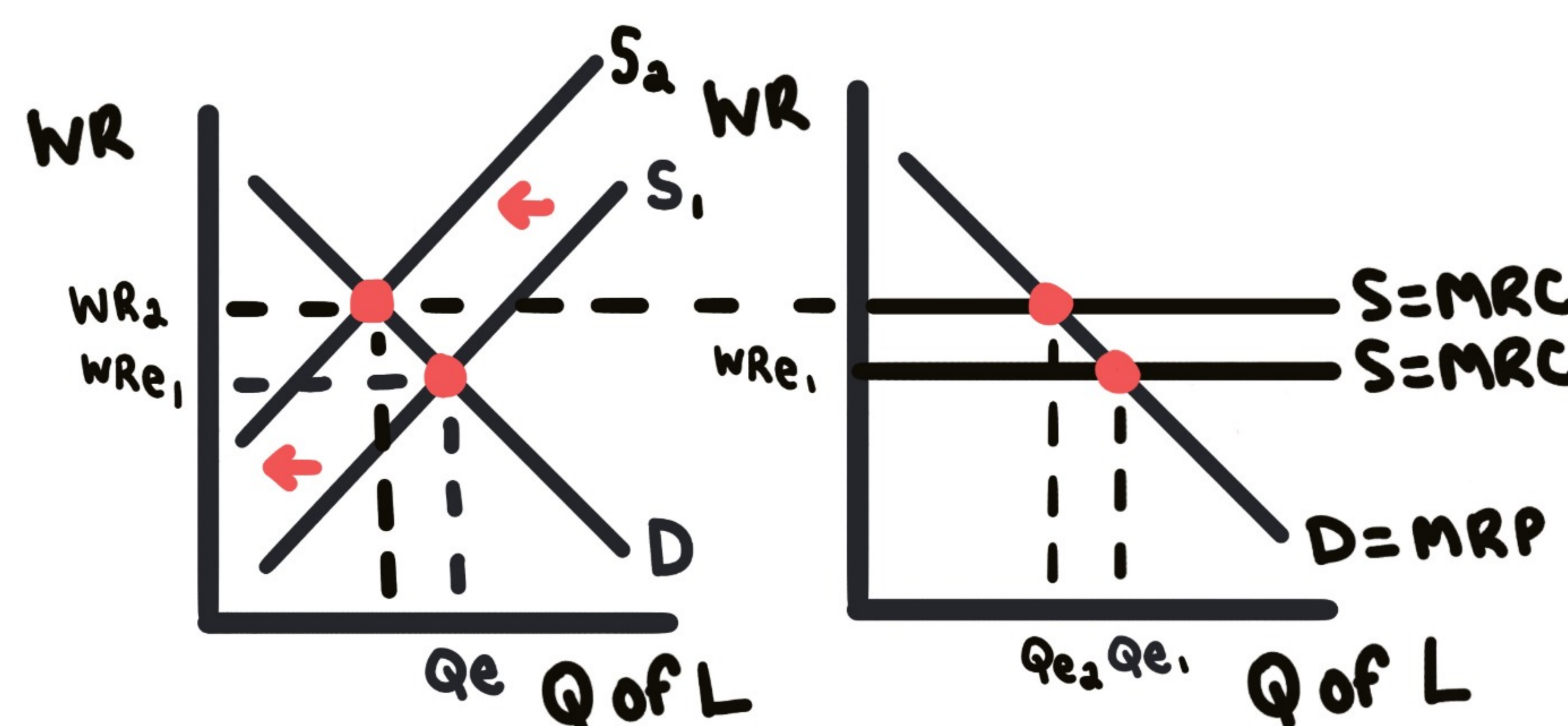
MRP also represents the firms' demand for the resource. There is more demand for resource with higher MRP.

changes based on the productivity of the worker (tends to decrease as more workers hired)

**Marginal Resource Cost (MRC):** the additional cost incurred by hiring one more unit of a resource.

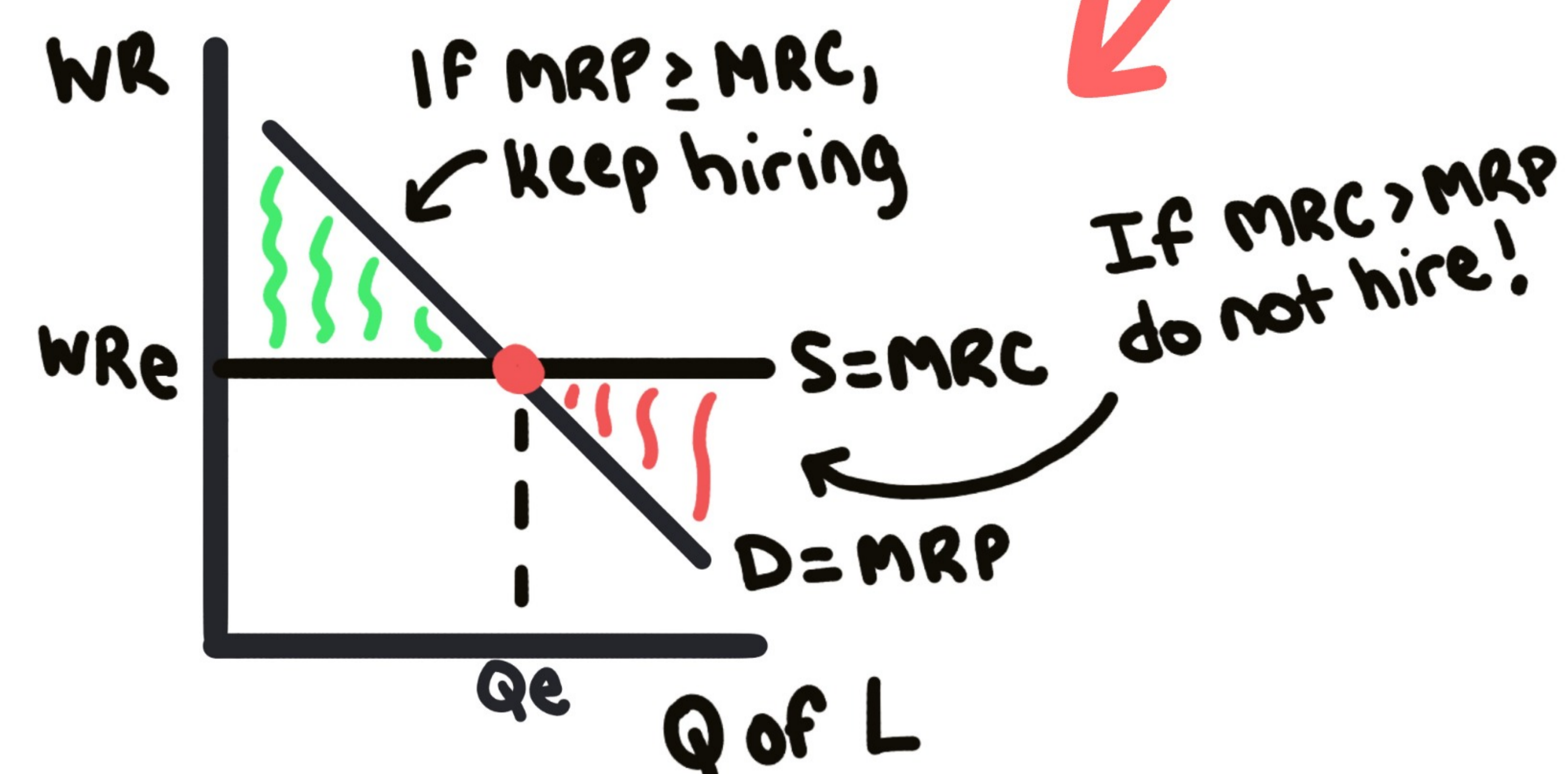
- $MRC = \text{Change in Total Resource Cost} / \text{Change in Quantity of Resource}$ .
- constant for perfect competition; increasing for monopsonies

Suppose Benny's Inc. is a typical firm in a perfectly competitive labor market. Using side-by-side graphs, show the impact of more effective job training programs for electricians.



**Perfect Competition in the Labor Market:**

- a labor market that has many firms willing to hire and many workers willing to work
- Both firms and workers are **wage takers**, meaning they accept the market wage
- On the firm graph,  $S = MRC$  because each worker earns the same exact wage
- $D = MRP$  is downward sloping due to diminishing returns
- Firms hire until  $MRP = MRC$

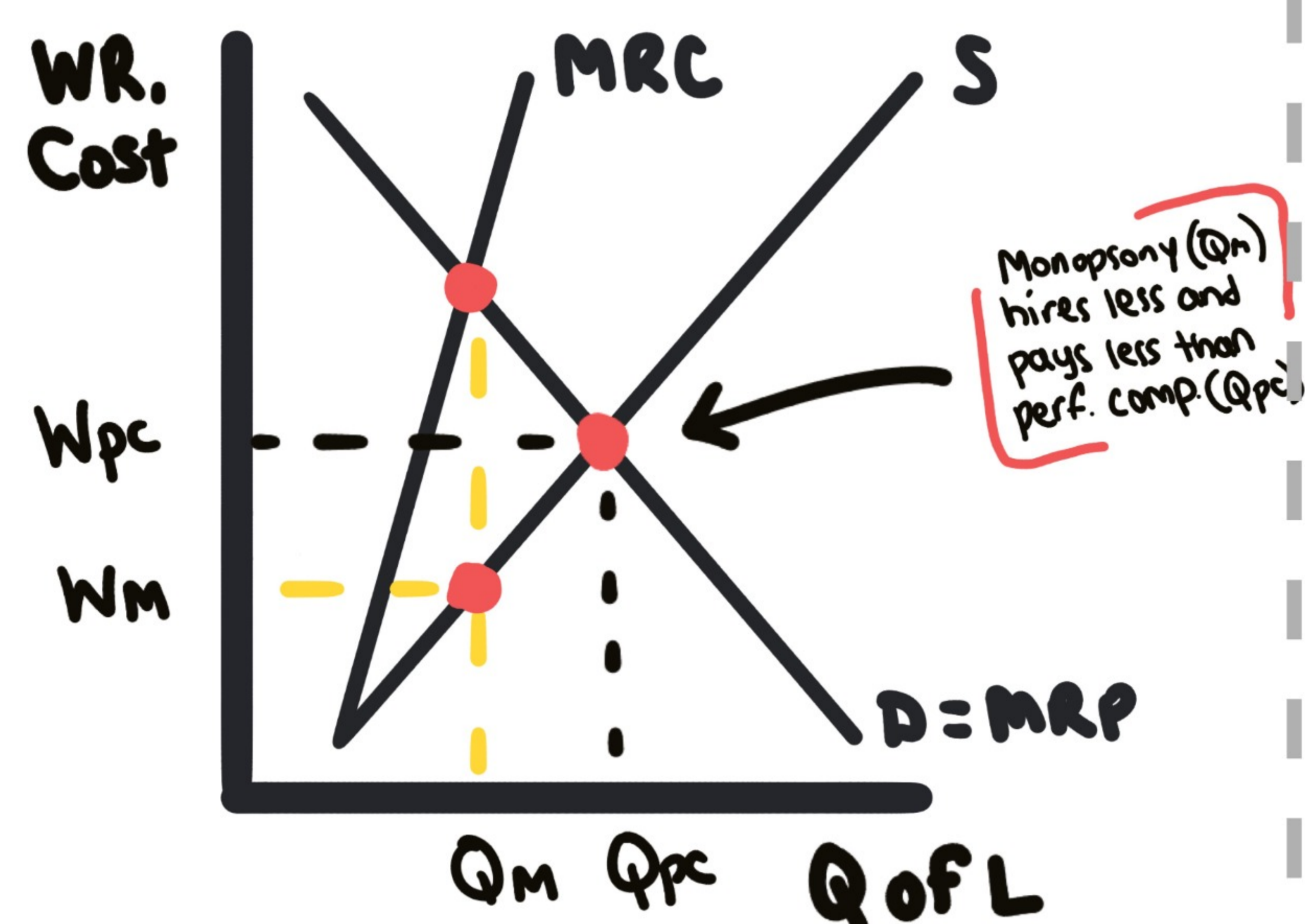


## Monopsonies

**Monopsonistic Market:** a market structure where there is only a single buyer of a resource (e.g., a "company town" where one factory hires everyone).

**Monopsonist:** the sole firm that hires in a monopsonistic market

- Wage-maker; chooses what wage to set, but still constrained by the law of supply
- $MRC > S$  because to attract more workers, firm must raise wages for ALL workers. The MRC of hiring an additional worker is the new worker's wage plus the extra wages paid to previous workers.



## Knowledge Check

Check your answers at [apdojo.com/ultimateCramSheet/answer-keys](http://apdojo.com/ultimateCramSheet/answer-keys)

a. How would additional government restrictions making it harder to become a nurse impact the wage paid to nurses and the number of nurses hired?

Wage Rate: Increase    Decrease    No Change

Quantity Hired: Increase    Decrease    No Change

b. Draw the graph for a typical firm in a perfectly competitive labor market. Suppose an additional payroll tax makes hiring workers more expensive. Show the impact to the number of workers hired.