Basic concepts of microeconomics and industrial organization: Supply function and equilibrium

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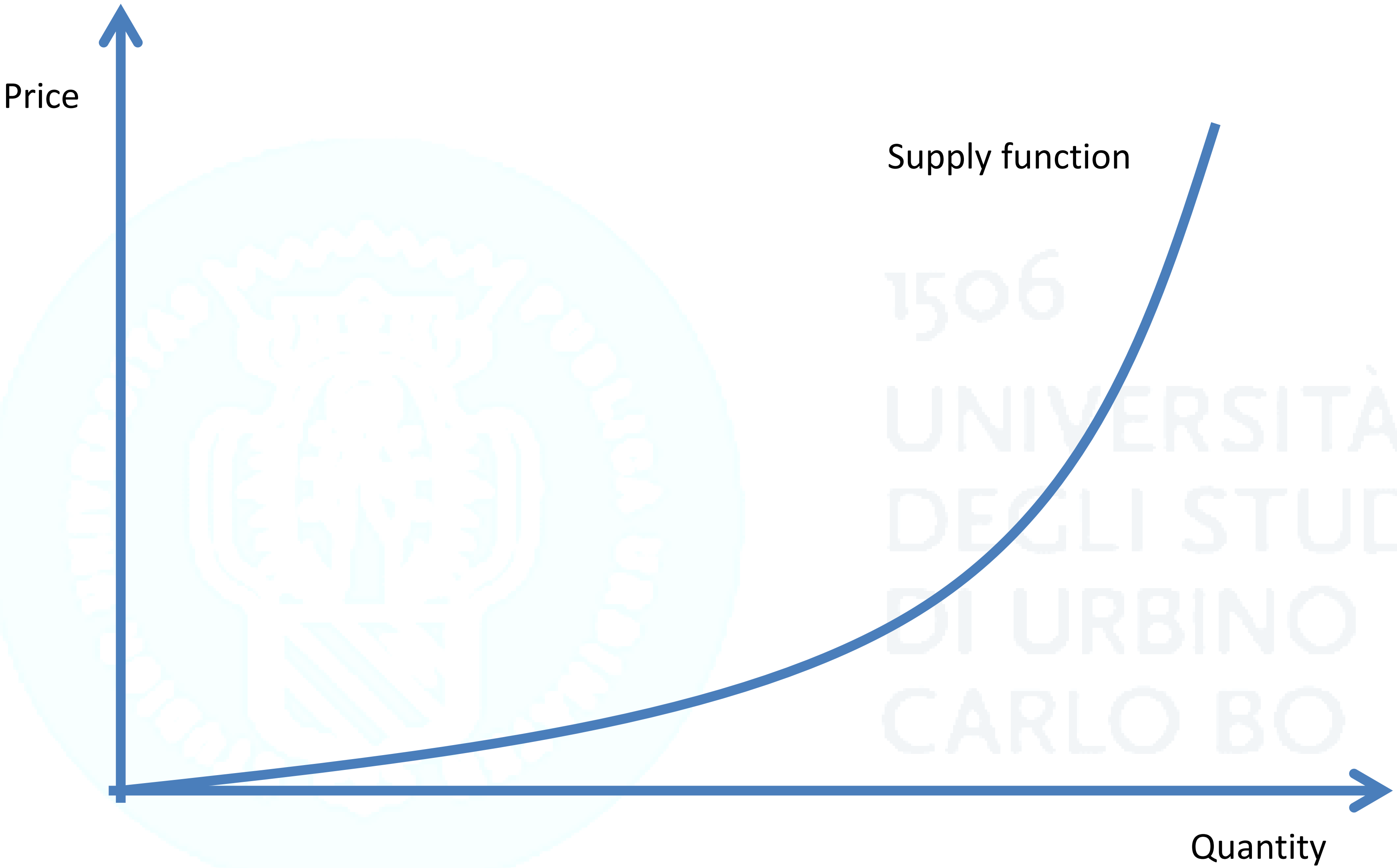
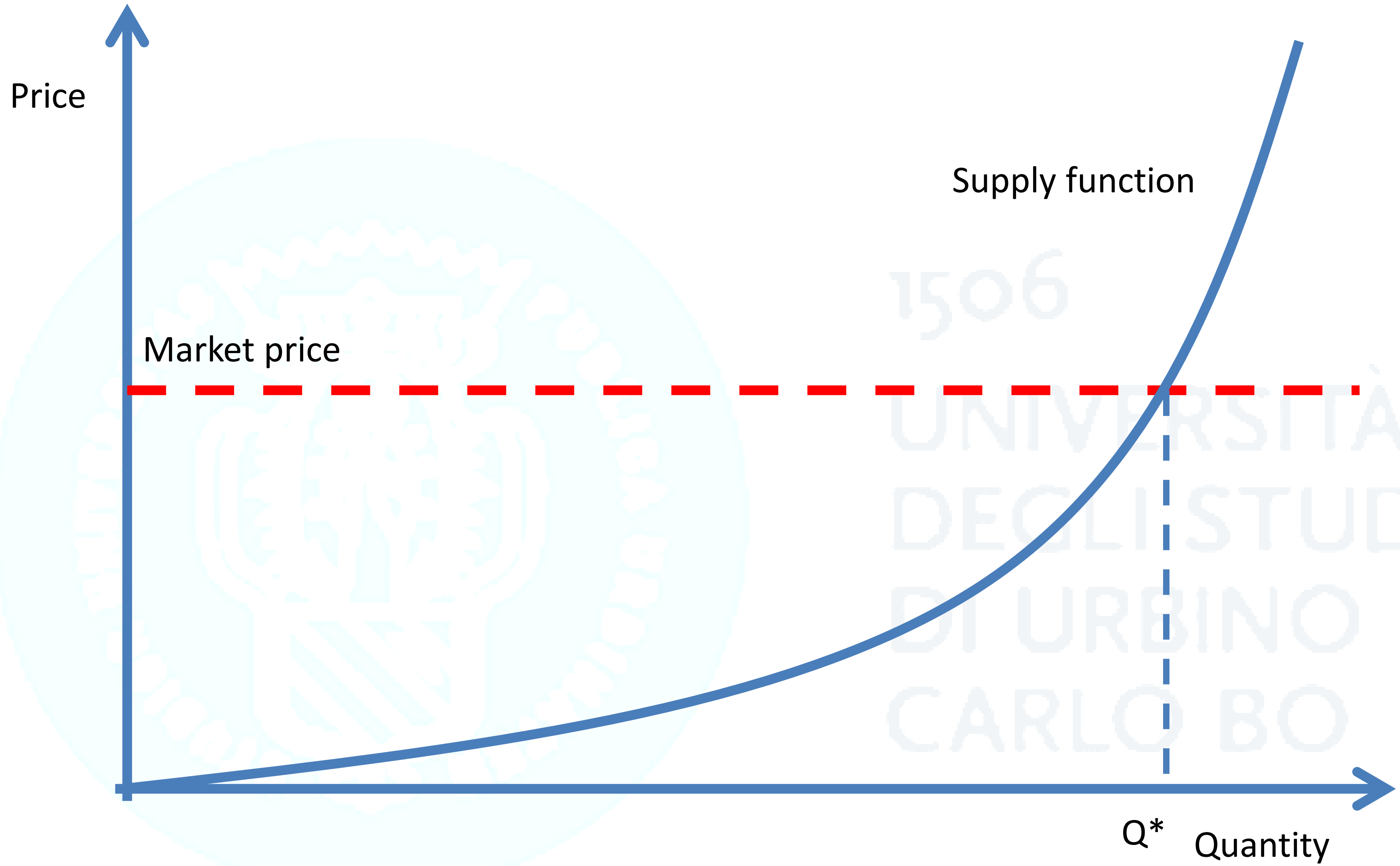
Supply function

- **Supply** indicates the **quantities** of a good or service which the **seller** is **willing** and **able** to **provide** at various **prices**
- **Law of supply ➔** ceteris paribus, the **quantity** supplied of a commodity will be **larger** at **higher** market **prices** and smaller at lower market prices


Price
Supply function
Quantity

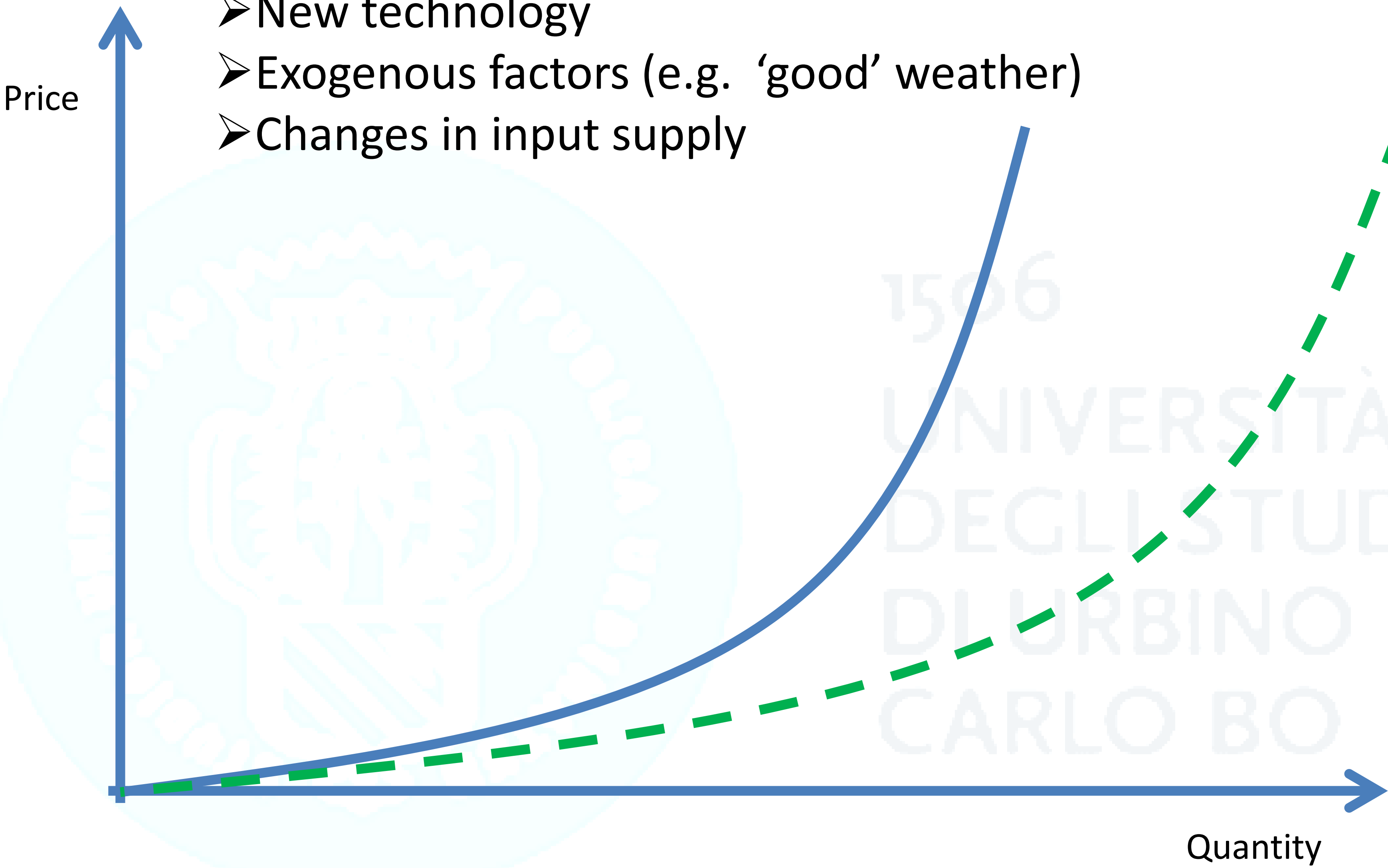
Law of diminishing returns

- The **successive unit** of **input** does **not** produce the **same** extra **output** as the **previous** one
- Important to **distinguish** between the role played by **diminishing (marginal) returns** and the role played by **returns to scale**


Price
Supply function
Market price
Q*
Quantity

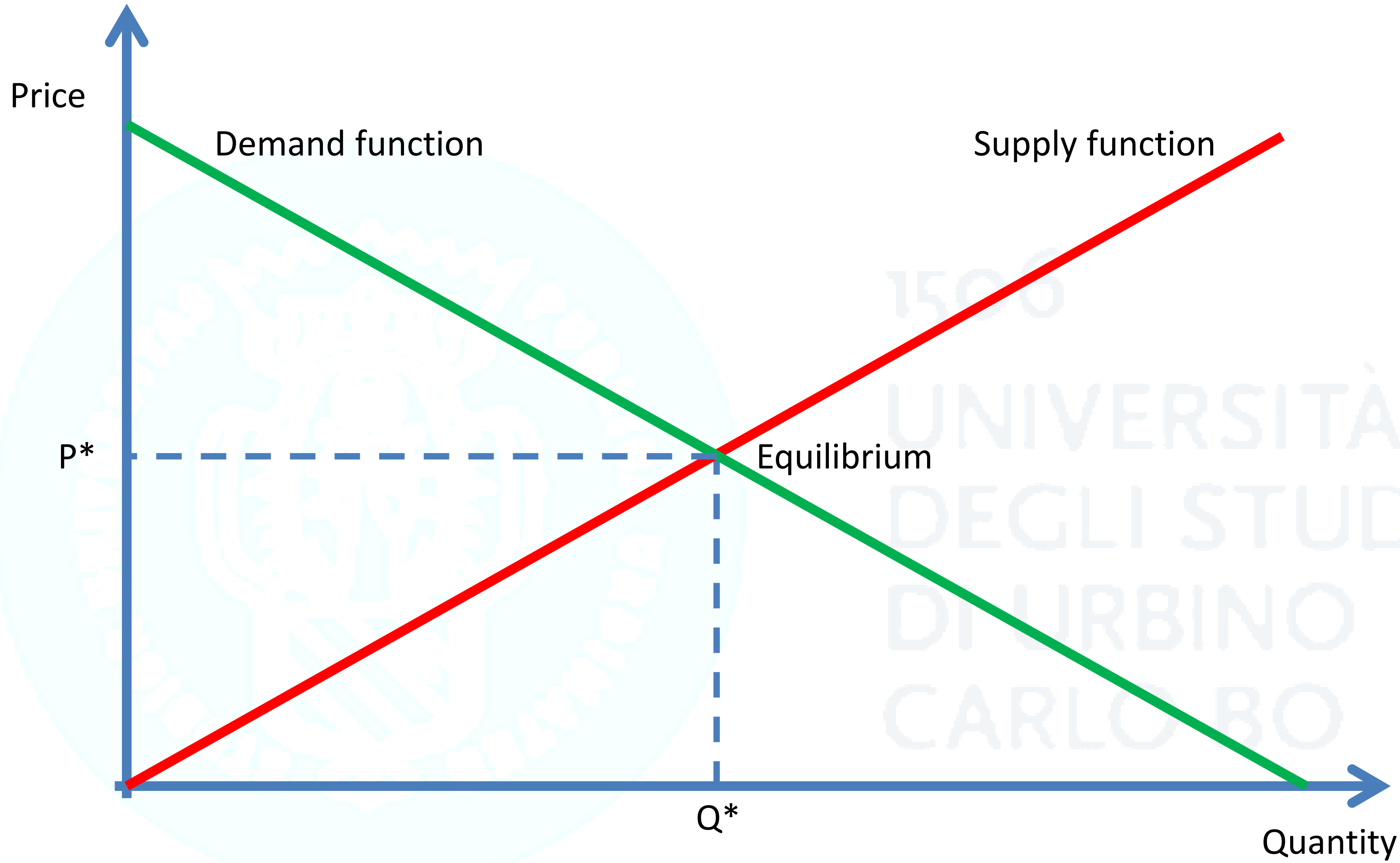
Supply shifts to the right if:

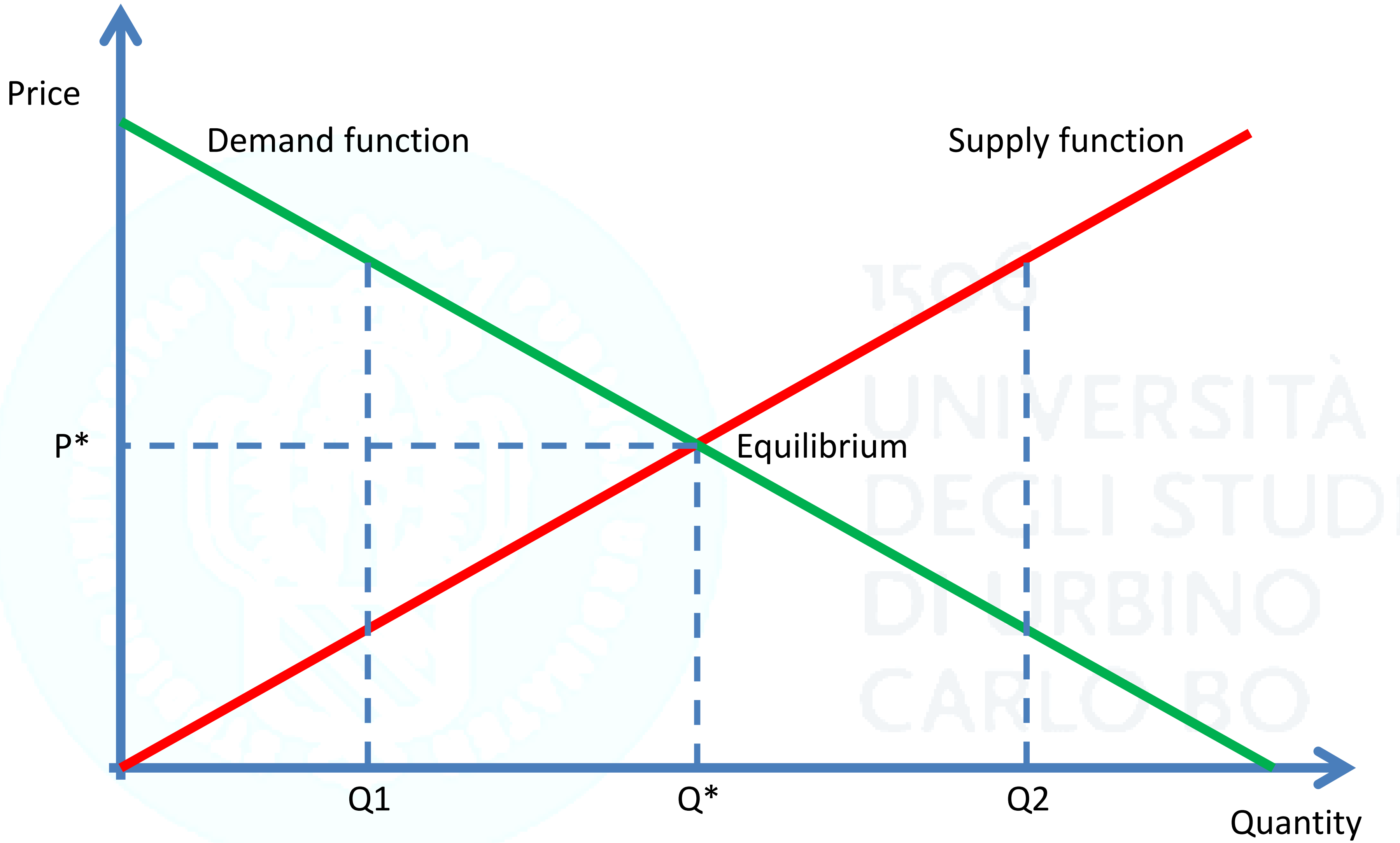
- New discoveries (e.g. gas or oil)
- New technology
- Exogenous factors (e.g. ‘good’ weather)
- Changes in input supply



Equilibrium in competitive merkets

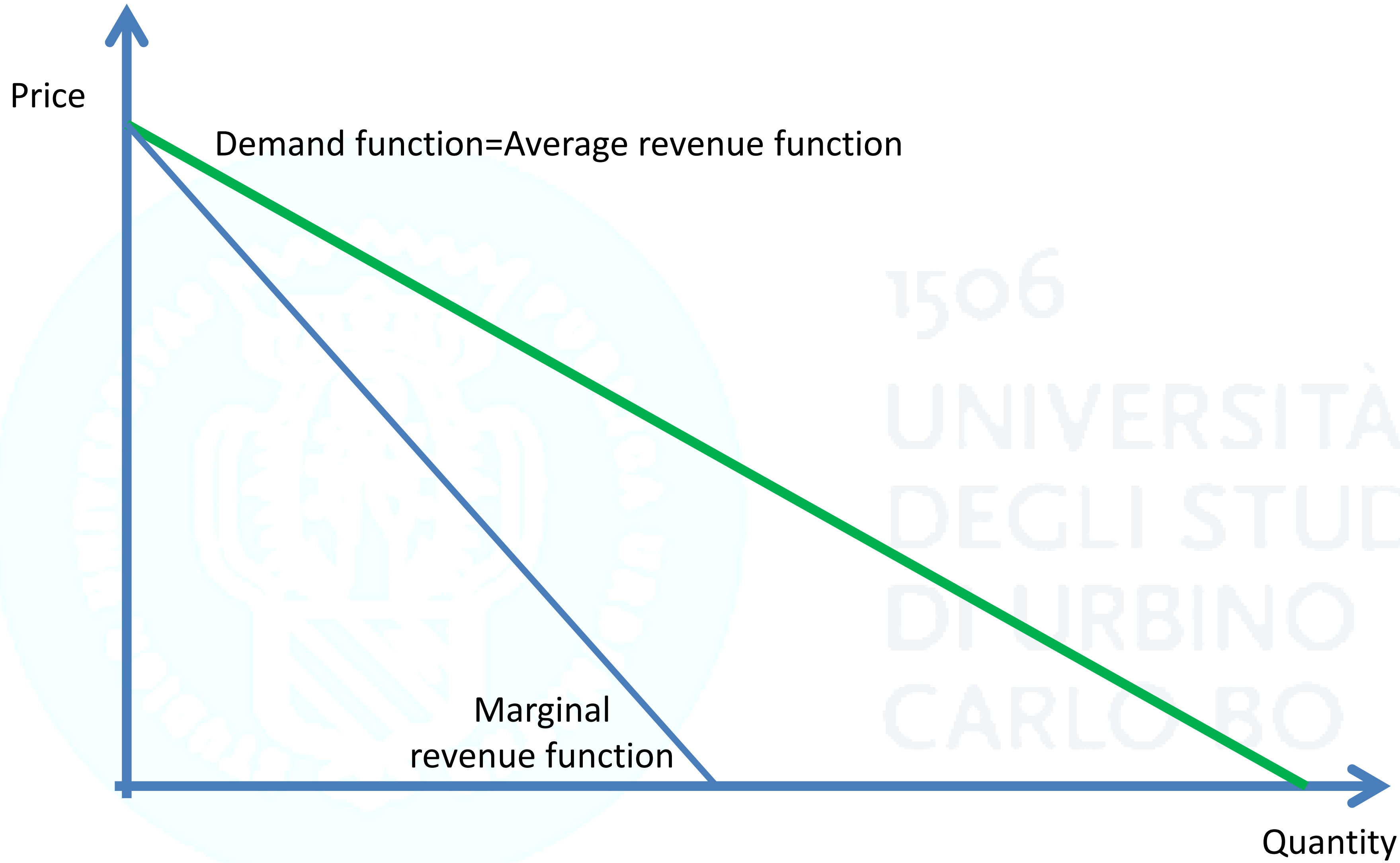
- Assumptions:
  - Large **number** of **buyers** and **sellers**
  - **Nobody** can **control** and have an **influence** on **market prices** (consumers and producers are **price-takers**)

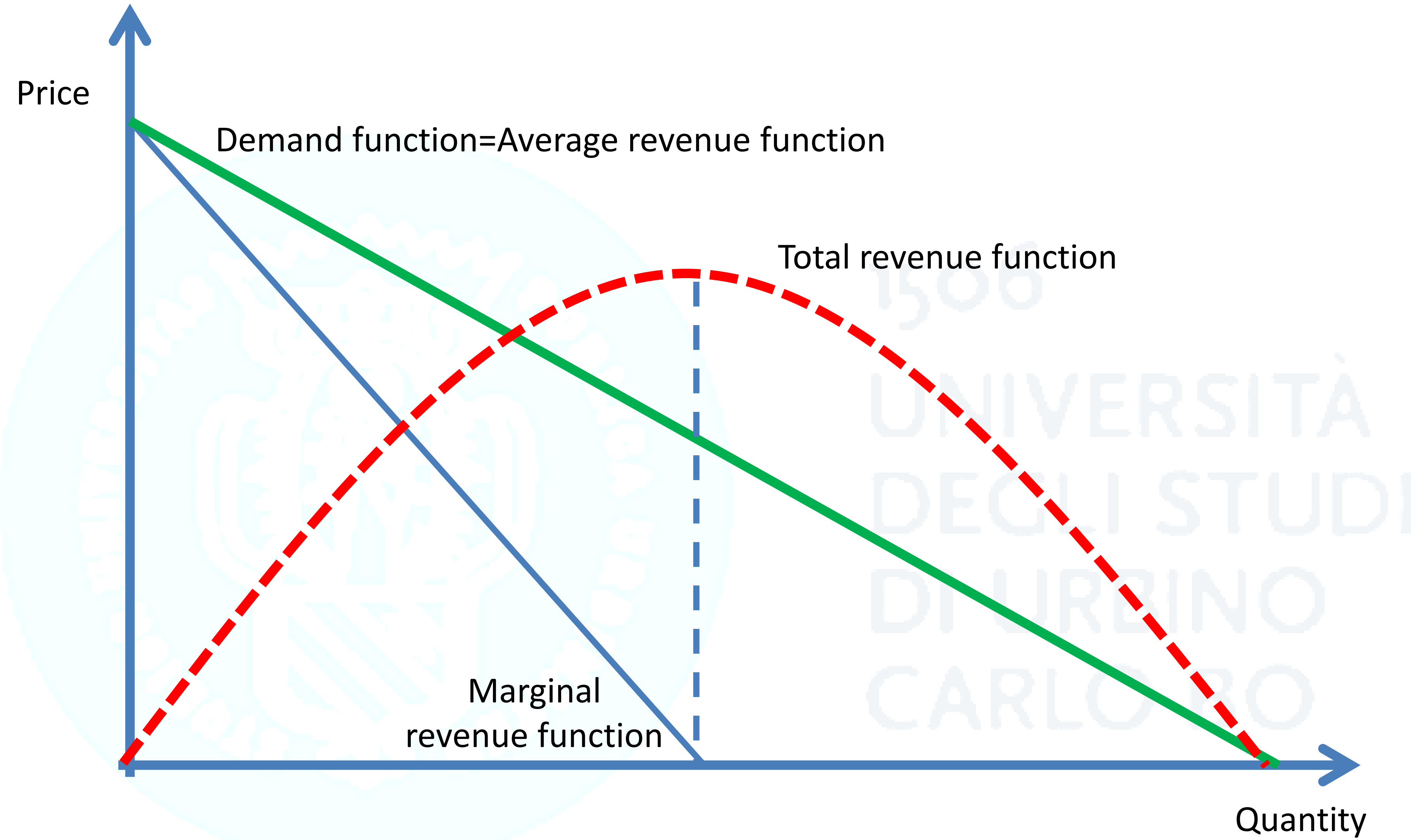

Price
Demand function
Supply function
P*
Equilibrium
Q*
Quantity


Price
Demand function
Supply function
P*
Equilibrium
Q1
Q*
Q2
Quantity

Total and marginal revenues

- **Revenues** of a firm as a **function** of **prices** and **quantity**
  - **Total revenues** are given by : TR(Q)=Q*P(Q) where P(Q) is the demand function
  - **Average revenues** are is the average amount (per unit of Q) of money received by the producer from selling a certain quantity Q ➔ AR=TR(Q)/Q=P(Q)
  - **Marginal revenue** ➔ revenue received from selling an additional unit of the good MR(Q)=dTR/dQ


Price
Demand function=Average revenue function
Marginal
revenue function
Quantity


Price
Demand function=Average revenue function
Total revenue function
Marginal
revenue function
Quantity