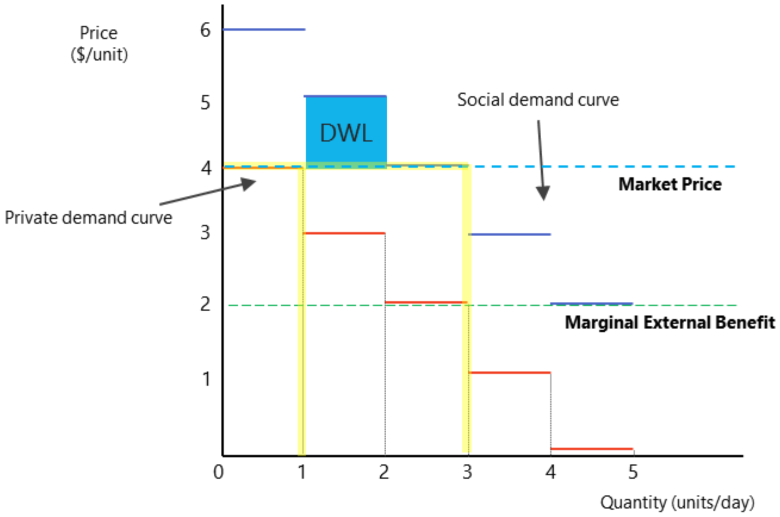
9. Externalities

ECON1101 • KC Notes

9.1 Positive Consumption Externality

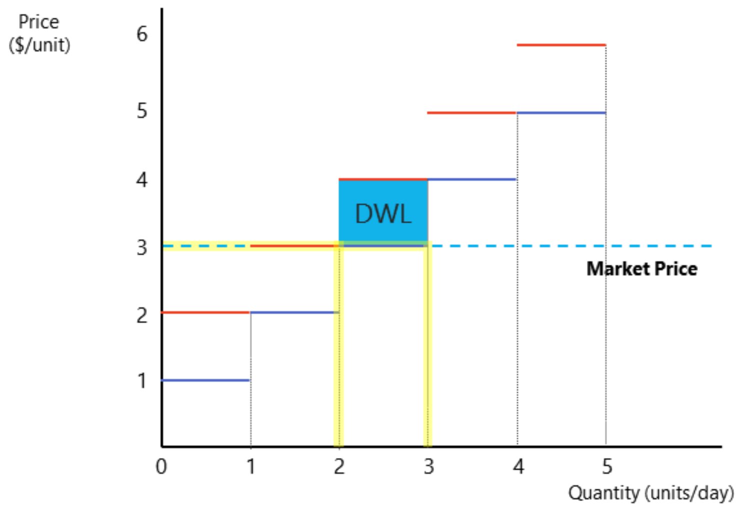
- **Positive Consumption Externality**: benefit accrued to **someone else** not involved in consumption of the good
  - People around (society) may gain marginal benefit from your consumption
- **Social Demand Curve**: Individual's demand curve plus the marginal external benefit
  - Because individual's quantity consumed is **not socially optimal** (does not take into account society's benefit), there is **DWL involved** – compare the surplus from demanding 1 vs 3 units.



- Solution: **Private negotiation** – if consumer offers to trade $2 for consuming 2 more units, both are better off and would accept the trade.
  1. Society will accept as the cost is equal to the marginal external benefit.
  2. You will accept because private marginal benefit + subsidy $\geq$ private marginal cost.
- **Coase Theorem**: If trade in an externality is possible and there are no transaction costs, bargaining will lead to an efficient outcome regardless of the initial allocation of property rights.
- Examples of positive consumption externalities:
  1. **Fitness activities**: reduce health care costs
  2. **Vaccinations**: reduces infection of others
  3. **Bike to work**: reduce traffic congestion and pollution
  4. **Education**: increased productivity on society as a whole
  5. **Social Networking**: enriches experience of others
  6. **Fire protection services**: reduces fire spreading to other places

9.2 Negative Production Externality

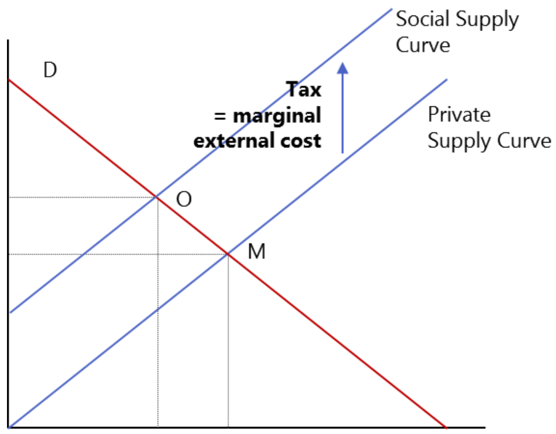
- **<u>Negative Production Externality</u>**: cost incurred by someone not involved in production of the good
    - Like 9.1, surplus is not maximised because society was not accounted for
    - Marginal benefit remains at $3 (because of payment), and he pays $1 for the marginal external cost he incurs

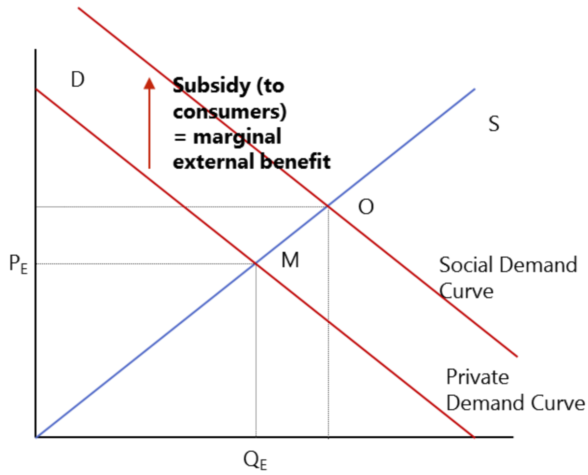


- Examples of negative production externalities:
    1. **Harmful production activities**, e.g. pollution, global warming
    2. **Excess risk taking**: banks may create global financial crises
    3. **Over-fishing**: depleting the stock of fish in the ocean

9.3 Externalities in Large Markets

- In large markets, it becomes difficult to privately negotiate with relevant parties. Government intervention (**subsidy for positive externalities, tax for negative externalities**) is required to move equilibrium from M to O.





9.4 Negative Consumption Externality

- **<u>Negative Consumption Externality</u>**: cost incurred by someone not involved in consumption of a good
- Examples include:
    1. **Smoking**: health cost to people around
    2. **Alcohol abuse**: health care cost in society
    3. **Driving**: increases pollution and traffic congestion

9.5 Positive Production Externality

- **<u>Positive Production Externality</u>**: benefit accrued by someone not involved in production of a good
- Examples include:
    1. **Beneficial production activities**: beekeeper improves pollination of surrounding crops, airport benefits shops around it by attracting customers
    2. **New production technologies**: firm spreads knowledge useful to other firms
    3. **On the job training**: improves a worker's productivity useful to other firms