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ECON 202—Montgomery College

TOPIC 16: EXTERNALITIES & MARKET FAILURE

I. Market failure
  a. Sometimes people think of market failure as when "the market fails to generate the result I want."
    i. Of course, such sloppy understanding is usually not so obvious. When people are so wrong, they tend to be more subtle about it. For example, they would call the existence of poor people or the sensationalism of the news a market failure.
  b. A *market failure* actually is when private decision-making fails to achieve an efficient allocation of scarce resources

II. Externalities
  a. An *externality* is a cost or benefit imposed on those who did not play a role in the decision making.
  b. A *positive externality* is a benefit imposed on others. Examples are people with good fashion sense, beautiful buildings, crop pollination from the bees on a honey farm, and some gains from technology.[1]
    i. Look back to the definition of externality: the word "imposed" is very important. It means that acts of charity are not positive externalities.
    ii. Remember, an externality must be *external* to the participants of the transaction. That's why it creates inefficiency: how much is produced considers only some of the benefits of the good or service.
    iii. A home may have a front yard full of flowers. The homeowner maintains it because they like the flowers. Passerbys like the flowers, too; if the homeowner fully cared about strangers' enjoyment, their joy would be incorporated into the owner's decisions on how much to work on it to make it look nice. But folks typically don't care that much about strangers' opinions and there's a positive externality when the flowers bloom.
    iv. In contrast, Montgomery College cares a great deal what everyone thinks about its grounds. There's no positive externality to the flowers on campus; your joy is something the

[1] Economist William Nordhaus estimates that inventors and innovators only capture about 2-2.5% of the benefits of their innovations; the rest go to society.

college considered when determining how many to plant and how well it's maintained.

c. A *negative externality* is a cost imposed on others. Examples include people with bad fashion sense, ugly buildings, crying babies, and pollution.
d. Because of how benefits and costs are distributed, activities with positive externalities are underused and those with negative externalities are overused, each creating deadweight loss.

III. Complications

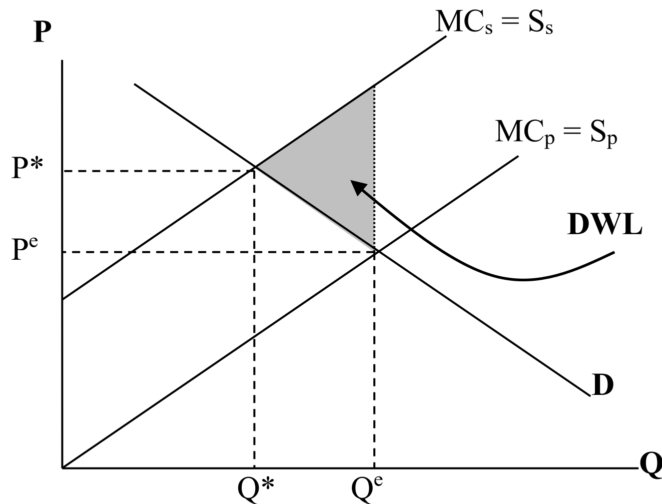
a. Is not creating a negative externality a kind of positive externality?
    i. ***Sort of***. Biking results in less pollution. Getting vaccinated prevents the spread of disease. These activities certainly benefit everyone, relatively speaking.
    ii. What's tricky is that if people didn't bike, they might walk or not take the trip at all, so to call "biking" specifically a positive externality is strange. As we will soon see, declaring one specific way to reduce a negative externality as a positive externality is problematic when there are other ways to reduce the negative externality.
    iii. Still, some people might have otherwise drove but the idea that biking is a positive externality is controversial because economists tend to focus on the direct effects of the activity, not the indirect effects. There's nothing inherent about biking that makes it good for strangers.
    iv. Vaccinations, though, are notably different—there really isn't another way to do what vaccinations accomplish and this function of disease reduction is a direct effect of the vaccine. It's the entire point of having the vaccine! There's thus a much stronger case that vaccines are a positive externality compared to biking.
b. Is opening a rival store a negative externality?
    i. ***Not really.*** It's certainly true that new entrants hurt established businesses and existing workers. It might be tempting to scream "externality!" whenever someone "takes your job" or "steals your customers."
    ii. But economists draw a distinction between "technological" and "pecuniary" negative externalities. Technological externalities involve how much can be produced holding the input usage (as in the quantity, not the cost) constant. This has been our focus

thus far. Pecuniary externalities relate to money—the wage the worker gets falls or the profit of the firm decreases.[2]

iii. Unlike technical externalities, pecuniary externalities don't result in the misallocation of scarce resources. This is a critical point—the whole problem with externalities is that they create a market failure. Indeed, without the ability to impose pecuniary losses on industry incumbents, the competitive process that leads to efficiency *would not work*.

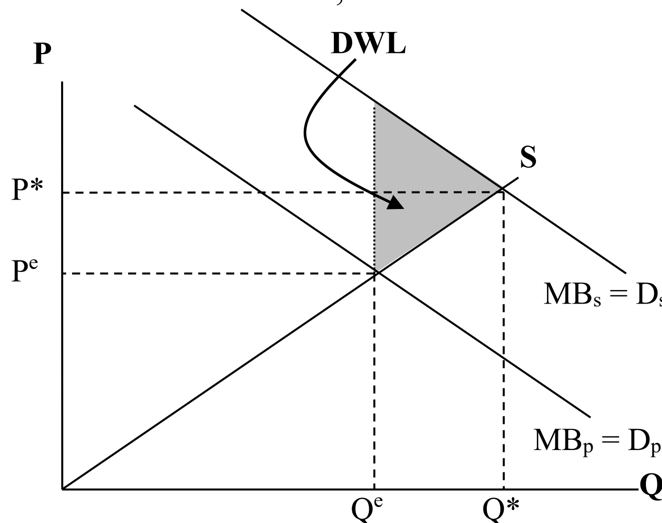
IV. Formalization

a. For externalized costs,



i. The DWL is there because we *are* producing when MB<MC.

b. And for externalized benefits,



i. The DWL is there because we *are not* producing when MB>MC.

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[2] See Scitovsky (1954) and Holcombe and Sobel (2001) for more information.