Core Economics: Concepts and Applications

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Chapter 3: Economics of Scarcity

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Economics of Scarcity

We are all familiar with scarcity. We don't have enough time to do everything we want to do. And we don't have enough money to buy everything we want to buy.

So, we end up juggling time and money until we come up with an allocation of time and money that's the best option for us.

For economists, scarcity is a key, persistent feature of economic life. Even though we have had economic growth for centuries, most countries are still faced with a scarcity of goods and services. There just does not seem to be enough for all.

So, countries have to make decisions about how they allocate their scarce resources. And, the world as a whole has to make decisions about scarce global resources – whether in coordination or haphazardly.

Chapter flow

This chapter has six main parts. We begin by looking at opportunity costs, which are the relevant costs in economic decisions related to scarcity. In the second part, we look at the nature of decision-making with scarcity. We show that the decisions to allocate scarce resources follow the marginal principle. In the third section, we show that markets allocate scarce resources properly, with a major exception called externalities.

Markets don't allocate resources properly when there are externalities

Sometimes economists adopt awful words as their jargon for significant concepts. One of these words is externality. Let's ignore the unappealing aspects of the term, and focus on what it means.

Externality rule

What's an externality? It's easiest to understand it from an example. Suppose you play your guitar or your music system loudly at night, and disturb my sleep. The fact that you bother me without compensating me at all means that my well-being depends upon an external source. **Formally, there is an externality when there is a negative impact on one person (me) from the actions of another person (you).**

Another way to look at this situation is to note that there is a difference between the private cost of the responsible person and social costs. In this case, you are the responsible person. When you play loud music, your private cost is zero. However, this leads to some cost for me. So, the social cost is greater than zero, while your private cost is zero.

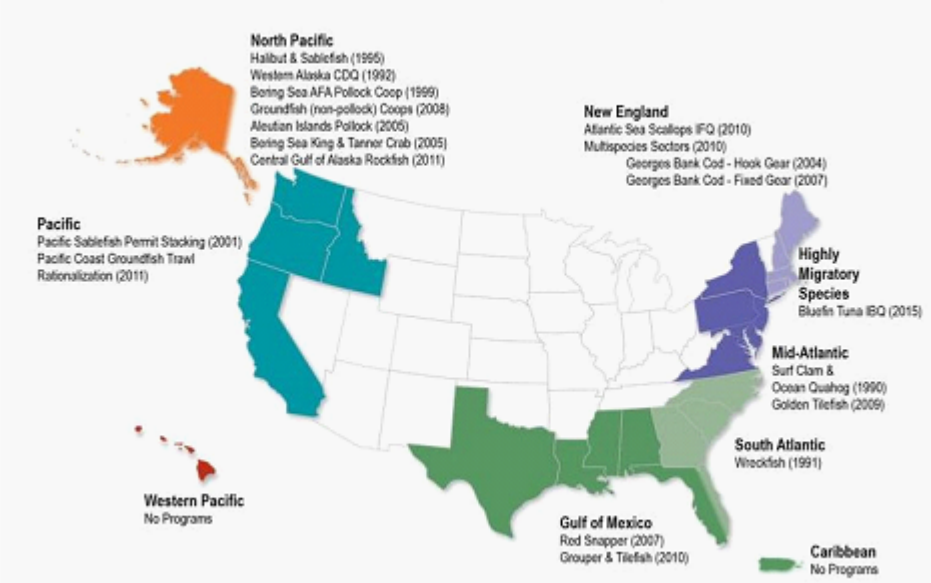
This externality leads to a misallocation of resources. In particular, you produce more loud music than you should be creating.

This leads to a general rule: markets don't allocate resources properly when there are externalities.

Positive externalities

So far, we have looked at externalities that have a negative impact. However, we can also have positive externalities. Assume that I have an attractive garden in my front yard. (Not much of an assumption. It's pretty accurate.) People who are walking by enjoy it, and sometimes stop to tell me that they enjoy it. But they don't pay me for this benefit that they get.

Figure 3.3 Catch share programs in the US (March 2020)



Source: NOAA Fisheries.

Example of setting taxes: climate change

Climate change is the most critical externality facing the world. **The scarce resource that is being overexploited is the carrying capacity of the atmosphere**. Scientists tell us that there was some noticeable climate change when the level of carbon dioxide CO_2 in the atmosphere reached 300 parts per million (ppm). At 350 ppm, there is a threat of more significant climate change.

In March 2020, the CO_2 level was more than 410 ppm. Hence, the issue is how much climate change we will experience, and when, not whether we will experience any climate change. But this is a matter of scientists, not economists.

From an economist's viewpoint, it's the future generations who will suffer the most because of the actions of the past and current generations. Economists quantify this loss in terms of the reduction in future output because of climate change. In short, we emit CO_2 today, and future generations suffer a GDP loss. Or, we cut back carbon dioxide emissions today, reduce the impact of climate change, and reduce future loss of GDP.

