

Chapter 6: Market Failure & Externalities (English)

Section 1.1: Market Failure

Market failure occurs when the free market is unable to efficiently distribute goods and services, causing an impairment in both economic and social welfare. Resources, in an ideal market, are distributed such that both producers and consumers' surpluses are maximized without any outside force. However, factors such as monopolies, public goods, externalities, and asymmetric information, among other reasons, the idealism cannot always be attained in practice.

A clear example is that of overproduction of materials that carry certain externalities when such externalities are not internalized; pollution is an example of such costs on society where industries consume without taking note of the social consequences. In a similar context, positive externalities such as education often fail to be fully produced as only part of the social surplus the good generates is included in the private return the producer earns after supplying the good. This means that the resources are poorly allocated and as a result, a market equilibrium is never fully efficient in terms of society's optimum outcome, as there is a need for the market to be regulated.

Such regulation comes at a cost and it is most important that the reasons and nature of market failure are clearly defined in order for policy makers to be able to draw up the relevant policies. Correcting inefficiencies means that the government has to impose a set of rules such as taxes, subsidies or in most cases provide for the public needs themselves.

Section 1.2: Types of Market Failures

Market failures come in various forms, each with unique characteristics and implications. They are listed below:

- **Public Goods:** Effectively used in the context of defining public goods is the term "non-excludable," meaning that no one would be effectively excluded from using the goods, and economics shows that one person's use of the good does not reduce the amount that another person is able to use. Examples are public goods such as public parks and national defense. The market usually fails to supply public goods in sufficient

quantities because there is no effective mechanism to guarantee that each of the consumers of these goods supplies payment willingly.

- Externalities: It is an imperfection which exists when a third party is affected by an economic transaction. A cost externality can also be negative, as in the case of pollution, where society incurs a cost while the producer benefits, creating a societal cost. Society reaps far greater benefits from certain positive externalities, such as immunization than the actual consumers or producers do. Since the consumers or other producers reap less than society as a whole, this leads to incompetence or inadequacy in the supply of the good.
 - Market Power: Similarly, in a market structure such as that of either a monopoly or an oligopoly when a few or a single firm has power over a larger portion of the market, which does result in higher prices and lesser output compared to competitive value.
 - Information Asymmetry: This happens when one party in a transaction has more or better information than the other, it can lead to choices that do not maximize welfare, such as in markets for used cars or health insurance.
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Section 1.3: Positive & Negative Externalities

Externalities are the consequences of an economic activity that are not reflected in the price of the good or service, but are experienced by individuals who are not involved with the metric in question. The first of these is negative externalities and the second, positive externalities.

Negative Externalities arise when the consumption or production of a commodity gives rise to disadvantages to others that weren't part of the economic exchange of goods and services. Common examples would be the pollution caused by industrial processes as the environmental costs are ignored in the prices of goods. Such externalities tend to encourage more than what is needed to be consumed or produced since the market price does not reflect the external costs incurred.

Positive Externalities occur when the action, in this case a market activity, is beneficial to people, who have not been part of the activity. Education has a

positive externality, because it raises the level of the individual who attained it, but it also elevates society as the understanding of crime and the individuals involvement in civic processes increases. Lance said that goods with positive externalities are generally said to be under provided in free markets because producers are unable to realize the full value of the benefits provided through the production activities.

As a measure of minimizing the externalities, the governments usually use taxes, or subsidies that seek to raise or lower the price of certain goods to show the true cost or benefit to the economy. For example, in regards to pollution, a tax on emissions of carbon is intended to eliminate the negative externality while the subsidies for education help enhance the consumption to the socially desirable level. These cases of government interventions more or less correct the imbalance between private and social welfare, and bring some relief against the market failures.

Section 1.4: Fun Facts

- Did you know the concept of "tragedy of the commons" is a classic example of market failure related to externalities? This phenomenon occurs when individuals use a common resource but disregard the impact of their actions on others using the same resource. For example, overfishing in international waters shows how individual incentives can lead to depletion of resources, highlighting the need for cooperative regulations to manage shared resources effectively.
- Did you know that London's introduction of the Congestion Charge in 2003 is a real-world application of addressing negative externalities? The charge was implemented to reduce traffic congestion and pollution in the city center, showing how targeted taxes can change behavior and improve public goods like air quality and reduced traffic.
- Ever heard about New Zealand's 'Kiwi Ingenuity' in addressing invasive species? New Zealand uses innovative market-based approaches, including the creation of tradable hunting rights and bounties, to control pests like possums that pose threats to native wildlife and spread tuberculosis. These measures harness market mechanisms to correct externalities associated with environmental damage.

- Did you know that bees provide a fantastic example of positive externalities? Bees not only produce honey but also play a crucial role in pollinating crops. The agricultural benefits of bee pollination are not reflected in the market price of honey, showcasing how some market activities can have widespread beneficial effects that are not captured in direct transactions.
- The famous Smog of London in 1952 led to the first significant air pollution regulations in history. The disastrous event, which caused thousands of premature deaths due to air pollution, triggered the Clean Air Act 1956. It's an early example of how severe negative externalities can lead to robust regulatory responses aimed at correcting market failures.