

The Economics of Market Failure

By James Gwartney and Tawni Ferrarini

Questions for thought. Markets fail. Have you ever wondered why? While listening to this audio, identify the major sources of market failure.

Key Point: Monopoly, public goods, and externalities generally create an incentive structure that encourages self-interested individuals to undertake activities that are inconsistent with the efficient use of resources. When these factors are present, markets will often fail to achieve idealized economic efficiency.

As Adam Smith indicated in the *Wealth of Nations* (1776), competitive markets directed by market prices will generally channel self-interested individuals toward activities that improve the welfare of a society and away from those that are counterproductive. When markets are competitive, well-defined property rights and the legal system protects property rights and prohibits fraud and theft, individuals will tend to allocate resources efficiently, and nations will prosper. However, there are three cases where markets will often fail to produce efficient outcomes and consequently, these failures will undermine overall growth and prosperity. Markets fail when (1) a monopoly, (2) public goods, or (3) externalities are present. Each is examined below.

Monopoly. When markets are open and competition is present, business owners and firms have a strong incentive to cater to the views of consumers and produce goods and services at a low cost if they want to avoid losses and stay in business. When businesses do not provide consumers with value relative to price, customers will spend their money elsewhere.

By connecting consumer value to price, profit and loss will impose discipline on businesses. They will incentivize businesses to provide quality service to their customers, keep their prices low, and discover new ways to provide value and reduce costs.

The situation is different under a monopoly. A firm is a monopolist when it is the sole producer of a good or service for which there are no attractive substitutes. A monopolist confronts an incentive structure that differs substantially from that of businesses operating in open, competitive markets. If consumers are unhappy with the price, product quality, or service of a monopolist, they are in a weak position to provide discipline. There are no rival firms producing similar products to which consumers can turn. As a result, the incentive of a monopolist to cater to the views of consumers is weak. Moreover, a monopolist will often be able to restrict output and maintain price above per unit cost.

The lack of competitive pressure makes it possible for a monopolist to gain at the expense of efficiency. Thus, when competition is weak or totally absent, markets will fail to allocate goods efficiently.

Public goods. Public goods are goods (and services) that possess two traits. First, providing the good to one party simultaneously makes it available to others. This is called jointness in consumption. Second, it is difficult, if not impossible, to make the public good available to only those who pay. Therefore, consumers of public goods will have an incentive to become “free riders” because it will be easy for them to consume the available quantity without paying. However, once a large number of people become free riders, too little of the good will be produced.

Businesses will be unable to produce the good profitably because they are unable to establish a one-to-one relationship between payment for and receipt of the good. When businesses are unable to cover their costs, they will turn to the production of other goods and services even if production of the public good would improve the well-being of the society.

When the total value derived from consumption of a good across individuals exceeds the cost, provision of the good will enhance the welfare of the society. Nonetheless, in the case of public goods, markets may fail to supply the good even when this criteria is met. National defense and a just legal system are two examples of public goods. Private businesses will often fail to produce the quantity of these goods consistent with economic efficiency. When this is the case, government provision may be able to improve the well-being of the society.

It is important to note that it is the characteristic of the good, not the sector in which it is produced, that determines whether it qualifies as a public good. There is a tendency to think that if a good is provided by the government, then it is a public good. This is not the case. Many of the goods provided by governments clearly do not have the characteristics of public goods. Medical services, education, mail delivery, trash collection, and electricity come to mind. Yes, these services are often supplied by governments. However, they are also produced profitably in the private market. In both government and the private market, nonpaying customers can be easily excluded. Additionally, providing any one of these services to one party does not automatically make them available to others.

Thus, provision of a good or service by the government does not make the item a public good.

Externalities. Sometimes the actions of an individual, group or business will “spill over” and exert a positive or negative impact on others and thereby affect their well-being without their consent. Such spillover effects are called externalities. For example, if you are trying to study and others nearby are playing loud, distracting music, they are imposing a negative externality on you.

The spillover effects may either impose a cost or create a benefit for third parties—people not directly involved in the transaction, activity, or exchange. When the spillover effects harm the non-consenting third parties, they are called external costs. Inefficiency will often result because the external cost will not be factored into total production costs and subsequently they will not be registered through markets. As a result, resources may be used to produce goods at prices that do not reflect their total production costs, especially the costs imposed on the non-consenting third parties.

Consider the production of paper. The firms in the market operate mills and purchase labor, trees, and other resources to produce paper, board, and pulp. But they also emit pollutants into the atmosphere that impose costs on residents living around the mills. The pollutants cause paint on buildings to deteriorate rapidly. They make it difficult for some people to breathe normally, and perhaps cause other health hazards. If the residents living near a pulp mill can prove they have been harmed, they could take the mill to court and force the paper producer to cover the cost of their damages. But it might be difficult to prove that they were harmed and that the pulp mill is responsible for the damage.

When this is the case, these costs will not be reflected through markets and therefore the cost of producing paper will be understated. As a result, inefficiencies emerge. The mill will produce more units of paper and charge less than it should because the firms' costs will not reflect the harm imposed on the non-consenting external parties.

To a large degree, external costs reflect a lack of fully defined and enforced property rights. The property right to a resource such as clean air is often poorly enforced and not clearly defined. That is, the cost of using the resource is not—at least not fully—registered through markets. The problems that arise when external costs are present highlight the importance of a legal system that provides clearly defined and enforced property rights.

In addition to being negative, externalities can be positive. Some activities will generate benefits for others without requiring them to pay. When the spillover effects enhance the welfare of others without requiring payment, they are called external benefits.

External benefits can also pose problems for markets. When those generating benefits are unable to reap the rewards associated with their activities, they have a tendency to withhold production even though more would enhance societal welfare.

For example, suppose a pharmaceutical company develops a vaccine protecting users against a contagious virus or some other communal disease. Of course, the vaccine can easily be marketed to users who will benefit directly from it.

However, because of the communal nature of the virus, as more and more people take the vaccine, nonusers will also be less likely to get the flu. But it will be very difficult for the pharmaceutical companies to capture any of the benefits derived by the nonusers. As a result, too little of the vaccine may be supplied. When external benefits are present, market forces may supply less than the amount consistent with economic efficiency.

Dealing with Externalities

What might be done to correct the inefficiencies arising from externalities? How might public policy improve the situation? When external costs are present, market prices will often understate the cost of producing a good or service. Units may be produced that generate less value than cost. However, if a tax was imposed on activities that generate external costs, an output level more consistent with economic efficiency might be achieved. Similarly, in the case of external benefits, too little of the good or service may be produced. In this case, government subsidies might result in an output level more consistent with efficiency.

The potential adverse consequences of externalities can sometimes be addressed without tax or subsidy policies. Property rights can be improved and enforced. When they are, entrepreneurs will have an incentive to find ways to capture more fully the gains from those actions that generate benefits for others when they can realize the rewards of doing so. Sometimes entrepreneurs and business leaders can extend the scope of their effort or firm. The development of golf courses illustrates this point. Because of the beauty and openness of the courses, many people find it attractive to live nearby.

Thus, constructing a golf course typically generates an external benefit—an increase in the value of the nearby property. In recent years, golf course developers have figured out how to capture this benefit. Now, they typically purchase a large tract of land around the planned course *before it is built*. This lets them resell the land at a higher price after

completing the golf course and the surrounding land has increased in value. By extending the scope of their activities to include real estate as well as golf course development, they are able to capture what would otherwise be external benefits.

Simple rules and manners can also help to control some types of external cost. For example, in the case of noise from nearby residents, apartment owners often have rules about playing loud music late at night and enforce the rules by expelling violators. Manners and social conventions can also play a role. If roommates are aware that talking on a phone during study time interferes with your studying, people with good manners will be sensitive to the views of others. As knowledge, awareness, and technology advance about environmental matters and how they influence quality of life, market rules can be established and enforced in fashions that make the environment an asset rather than a liability by giving owners an incentive for stewardship.

Sound Thinking About Market Failure

Economic analysis indicates that monopolies (when there is a lack of competition), public goods, and externalities often pose challenges and sometimes undermine the efficient operation of markets.

Economists use the term market failure to describe the situation where the structure of incentives are distorted and therefore markets will fail to direct self-interested decision-makers toward projects that are beneficial given the costs, and away from those that are not.

Market failure creates the potential for government action that will improve economic efficiency. But, simply because markets fail to achieve ideal economic efficiency, it does not follow that political action will lead to an improvement. The political process is merely an alternative form of economic organization. As we will see, economics indicates that the political process, like markets, has shortcomings. Put another way, there is government failure as well as market failure. Government failure is present when the structure of incentives gives reason to expect that political decision-makers pursuing their own personal interest will lead to a counterproductive, rather than productive, use of resources.

Today, government expenditures constitute 40 percent or more of national income in the United States and several other countries. Given the increasing size and scope of government, understanding the political allocation of resources is clearly a highly important topic. Moreover, the tools of economics provide considerable insight on the operation of the political process. This will be the focal point of the upcoming modules.

Concluding question

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Have you ever thought about how government can first improve property rights and then rely on markets to help remedy some of the problems accompanying negative externalities? Provide an example relating to pollution emissions.

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