MANAGERIAL ECONOMICS

Government in the Market Economy
Government is a fact of life in every business. Like it or not, the government often plays a significant role in many aspects of how you do your job. Taxes and regulation are just two reminders. Know your way around government policy, and you'll gain more control over the situation. Understand the forces driving the government's involvement, and you'll have a powerful leg up.

**Why Governments Get Involved**

According to free-market theories of economics, buyers and sellers freely trade with each other according to their own self-interest and the laws of supply and demand. Competitive market forces efficiently allocate resources.

The reality, though, is often quite different. How much involvement government should have is subject to fierce debate, but most people agree that society needs some form of government regulation and public policy in order to balance public and private interests and promote economic growth.

The chief reason is externalities. Externalities come about when economic activity has an unintended affect on a third party that is not directly involved in a transaction. Externalities are more commonly referred to as spillover or neighborhood effects.

Externalities can be negative or positive to society. An example of a negative externality is an oil spill. When an oil tanker runs aground, a company might clean up the mess, pay a fine, and compensate fishermen for damages. But think of all the other negative externalities: the damage to the ecosystem, the loss to the tourism industry, and so on. The underlying problem with a negative externality is how to measure the full social cost associated with economic activity.

A positive externality happens when the production or consumption of a good or service benefits a third party who did not pay for that benefit. Education is the most common example of a positive externality. Better-educated people tend to spur higher productivity for companies, create new scientific discoveries, and generate more taxes from higher salaries. Education therefore benefits society as much or more as it benefits the individual. But that positive externality is often undervalued, because the full value of the benefit is not always factored into the price.

Market and nonmarket solutions have arisen to address externalities. Governments often attempt to internalize an externality. They offer incentives to a producer or consumer so as to make externalities a part of the decision-making process.

Taxes are frequently used to correct negative externalities. These are also known as a Pigovian tax, named after Arthur Pigou, the economist who advocated for them. A common example is a tax on companies that pollute, or a so-called "sin tax" on producers and consumers of tobacco products. The purpose behind a Pigovian tax is to encourage the main actors involved to find a less harmful way to operate. Likewise, Pigovian subsidies or grants are often paid in the event of a positive externality.

Market solutions are often used to ensure sufficient production of goods and services with significant externalities. Better health is a positive externality that benefits society in general. An exchange for buyers and sellers of health insurance is an example of a simple market mechanism that supporters say can help people compare insurance prices, and therefore gain coverage and stay healthier than those without insurance. A market solution depends on information being readily available and transaction costs being minimal to moderate.

Essential to understanding market solutions is the Coase Theorem. It states that if private parties can bargain freely over the allocation of resources under a well-defined system of property rights, then markets are capable of efficiently solving externality-induced problems on their own.

The Coase Theorem was originally applied to the regulation of radio frequencies. When competing stations used the same frequency, their signals would interfere. Coase argued that since the stations
could bargain over who gets the frequency, they could reach a mutually beneficial arrangement to avoid interference based on whichever one received the most economic benefit from its use. In reality, Coase later realized there were sometimes significant transaction costs to overcome, since governments often made the initial allocation of airspace resources. For this insight and others, he received the Nobel Prize in 1991.

Government and Public Goods

The use of private goods, such as food and clothing, is normally limited to paying customers. Private goods can induce competition among consumers -- as evidenced in America by the behavior of the energetic crowds that begin assembling hours before the malls open on the day after Thanksgiving. Private goods are also exclusionary, in the sense that when you use them, other people cannot.

Public goods, on the other hand, are products and services that everyone can use — regardless of whether they personally paid for them or not, and without affecting the amount available or excluding someone else. Examples include national defense, police and fire protection, and public television and radio.

The use of public goods does not induce competition among consumers. The fact that you benefit from national defense does not reduce the availability of that benefit to me, and your listening to the radio does not reduce my ability to listen to the same program. Public goods are also non-exclusionary, meaning that it is impossible to prevent the benefits of the public good from spreading to those who do not pay for it. For example, say that you spend time and money petitioning your local city council to install a guardrail and reflector lights on a hazardous stretch of roadway. Your neighbors will receive the same benefits that you do, although they did nothing to warrant it.

The tendency for consumers to avoid paying their full share of the cost of a public good is known as the free rider problem. The result is often that governments will ensure that important public goods are funded, since private businesses will not step in to provide them in sufficient quantities.

When Should Governments Act?

When they do step in, governments must fund things that are in society’s best interest overall. The economist Vilfredo Pareto offered a way to think about when that condition is met. A public road project, for example, is Pareto satisfactory if at least one person is better off and no one is worse off if the road is built. When all such Pareto-satisfactory public projects like roads, parks, and libraries get built, it is considered Pareto optimal.

Now, this all sounds great in theory, but in reality how can we meet such strict standards? Most projects have winners and losers. In these cases, we need to aim for what has potential Pareto improvement. That is, the project has net positive benefits from a cost-benefit perspective.

To help explain, consider our road example. To build a public road that will provide faster access to the interstate, private property must often be taken by eminent domain. Those traveling to and from work every day gain from the faster connection, but private-property owners whose land is taken away may not receive compensation from the government equal to the land’s value or their personal memories.

Any public good or service should be supplied up to the amount where marginal social cost equals marginal social benefit. Before proceeding, we need to be clear on a few terms. Marginal social cost includes the cost of production, plus any marginal external costs that are not directly borne by the producers or consumers (see our earlier discussion of externalities). Similarly, marginal social benefits are the sum of marginal private benefits plus marginal external benefits.

Social benefits are maximized when each government project or public investment’s ratio of marginal social benefits (MSB) equals its ratio of marginal social costs (MSC) across all programs. Consider two government projects, X and Y. We can write the following equation:

$$\frac{\text{Marginal Social Benefit}_X}{\text{Marginal Social Benefit}_Y} = \frac{\text{Marginal Social Cost}_X}{\text{Marginal Social Benefit}_Y}$$

This position reflects an effective use of taxpayer dollars, because an identical payoff per dollar of marginal social costs exists. We can also consider the optimal relative amounts of projects X and Y available to consumers as long as the marginal social benefit to marginal cost ratio is equal for each project:
Marginal Social Benefit X divided by the Marginal Social Cost X = Marginal Social Benefit Y divided by Marginal Social Benefit Y

If MSB/MSC is greater than 1, net marginal benefits to society can be achieved through public-sector expansion. If MSB/MSC is less than 1, resources are being wasted.

Concepts like net present value and internal rate of return can also be used to evaluate social projects. If the social net present value is greater than zero, the project should be undertaken; if the social internal rate of return is greater than the discount rate, the project should be undertaken. Likewise, if the benefit-cost ratio is greater than one, the project should be undertaken. Your textbook discusses these concepts in much greater detail.

As we've seen, public-sector managers can make use of the same economic tools as their private sector counterparts. Effective management of scarce resources in the production of public goods and services requires a comparison of the marginal social benefit of a public good against the marginal social cost. It's wise for governments and companies alike to keep these goals in mind when making changes to the system.