

Chapter 6

Chapter Objectives

- Describe evaluative criteria for judging the value of policy proposals or alternatives.
- Explain how to apply the methods of policy analysis.
- Identify three key economic approaches to policy analysis.
- Distinguish between the different types of decision making and impact analyses.
- Compare the ethical approach of policy analysis against other methods.

Looking for alternatives. The sharp drop in gas prices in recent years no doubt pleased most consumers, but it also led to a surge in purchase of large SUVs, which undercut vehicle fuel efficiency goals that were designed to reduce reliance on oil and limit greenhouse gas emissions. The photo shows gas prices on a sign outside a fueling station in Chillicothe, Illinois, on December 11, 2015. By early 2017, prices had risen to about \$2.30 a gallon, still historically low. *(Daniel Acker/Bloomberg via Getty Images)*



Assessing Policy Alternatives

When gasoline prices surged in 2011 and 2012, automobile makers responded by heavily promoting a new generation of more efficient vehicles, touting their highway fuel economy of more than 40 miles per gallon. Nearly all of them also invested heavily in development of new hybrid or electric models to meet rising public demand for efficient cars, trucks, and SUVs. The same forces led the Obama administration to strike a new deal with U.S. auto companies that took effect in 2012 and will raise fuel efficiency standards to a fleet average of 54.5 miles per gallon by 2025. It was a move that was sure to have important impacts not only on energy use but on national security, jobs and the economy, climate change, and the health of the U.S. population.¹ Beyond all of these developments, as we noted in chapter 3, the United States in 2010 had the worst offshore oil spill in its history with the BP Deepwater Horizon accident in the Gulf of Mexico, sparking a reorganization of the federal agency charged with regulating offshore oil drilling.

The political debates over what to do about gasoline prices and other energy issues were similar to those just four years earlier when a sharp increase in the cost of gasoline affected nearly everyone in the United States. The price of oil in 2008 soared to \$147 a barrel on the international market and to more than \$4 a gallon in the United States, resulting in short-term, widespread economic pain. The cost of goods increased as a result of shipping costs, people began buying more fuel-efficient cars, and demand for mass transit rose so much that many cities doubted they could cope.² The candidates in the 2008 presidential election debated how best to respond to the problem, including competing proposals to lower the federal gasoline tax to ease the burden on consumers; increase fuel efficiency requirements (which had just been raised in late 2007); and promote energy conservation, efficiency, and the use of alternative or renewable fuels through boosts in federal research and tax credits.³

The year 2015, however, brought a major reversal in many of these trends as a global glut of oil from high levels of production and diminishing demand sent gasoline prices plummeting to less than \$2 a gallon. Even by late 2016, the price for a gallon of regular gas was about \$2.16. What impact did the falling prices have? Among other changes, vehicle manufacturers stopped touting the fuel economy of their new cars and trucks and reverted to emphasizing power and performance characteristics in the ever-abundant television and online advertisements.

These fascinating twists and turns in energy use and debate over it during the last decade included nearly every criterion and method that policy analysts typically use to assess public policy proposals. Commentators and policymakers at all levels of government raised questions about access to energy sources and their costs; national security implications of U.S. dependence on imported oil; environmental, health, and safety risks of energy exploration, development, and use; the role of government and regulation (e.g., in setting fuel efficiency standards and in supervision of offshore drilling); and the importance of economic incentives for energy development, including renewable sources such as wind and solar power, because of rising concern for climate change. There were also questions about whether to continue generous oil company subsidies, the technical feasibility of offshore drilling in certain areas, and the likely effectiveness of such drilling; if and when it would produce substantial quantities of oil and how much such efforts would affect the price of gasoline and the nation's dependence on foreign oil. Each side in these debates pointed to arguments that bolstered its position, and each challenged the other's assumptions and portrayals of the situation.

It was a fairly typical policy debate. It illustrated well the tendency of policymakers and their staffs to engage in intensive issue framing and to use policy studies to reinforce and advocate their positions and as ammunition against opponents. It showed as well the importance of asking which proposals, such as subsidies for purchase of electric vehicles, increases in the gasoline tax, development of a new carbon tax, or continued support for fossil fuel development, would be most likely to meet competing national needs, and which would be technically feasible, economically acceptable, fair, and socially and politically acceptable. In this context, consider one particular study that did get some attention during the 2008 debate, even if it changed few minds. The Department of Energy (DOE) reported in 2007 that new drilling in the offshore areas would not have a significant effect on oil production before 2030, and that the ultimate effect on prices would be "insignificant" because oil is traded globally and the amounts would be too little to affect worldwide prices.⁴

Whether policymakers use them well or not, policy analyses like the one by the DOE are integral to the modern policymaking process precisely because the issues often are complicated and involve highly technical questions well beyond the expertise of elected officials, not to mention the ability of the public to sort out facts from campaign rhetoric and other political stances. At the core of such analyses is a clear delineation of the criteria developed for judging policy alternatives and the application of available tools and methods to provide information

essential to decision making. Yet as the case of energy policy shows well, even the best studies may persuade few elected officials and their supporters in the heat of political competition.

This chapter reviews the leading evaluative criteria used today as well as the methods of policy analysis most commonly employed. These methods range from cost-benefit analysis that addresses economic criteria to political and institutional assessments that estimate political or administrative feasibility. The combination of clear evaluative criteria and careful analysis should make it easier to determine whether one policy alternative is better than another. Policy analysts and those involved in making policy choices want to know whether one alternative is more likely than another to be more effective, or whether one will be cheaper. They want to ask as well about differences in equity or fairness, such as how these alternative policy options will distribute their costs or benefits across the population. That is, will some groups (such as wealthy or retired citizens) gain more than others, and will some (such as the middle class or those in the workforce) pay more than others for that policy? It is the purpose of policy analysis to provide that kind of information, and it is up to policymakers and the public to decide what to do with it.

Evaluative Criteria for Judging Policy Proposals

Evaluative criteria are the specific dimensions of policy objectives (what policy proposals seek to achieve) that can be used to weigh policy options or judge the merits of existing policies or programs. Evaluative criteria can also be regarded as justifications or rationales for a policy or government action. The use of explicit evaluative criteria establishes relatively clear standards that can keep policy analysis objective and focused on the issues of greatest concern to the analyst, the intended audience, or the client. Such standards also allow users to rank alternatives in order of their preferences. It makes sense to choose the criteria that fit a given policy area and set of circumstances. Obviously, some criteria make more sense for judging access to health care services than they would for determining whether Congress should cut or increase agricultural subsidies. In addition, as Brian W. Hogwood and Lewis A. Gunn (1984) argued, policy analysis for the real world is always contingent on the political and institutional context of policy debate and is influenced by available resources and time.

The dimensions of policy objectives that are most often the target of inquiry and political argument include effectiveness, efficiency (costs in relation to benefits), risks, uncertainty, ethics, political feasibility, administrative feasibility, equity or fairness, liberty or freedom, legality, and (sometimes) constitutionality. This is quite a long list, and analysts seldom address all of these elements in any single study. Chapter 1 suggested the usefulness of focusing on four of these criteria: effectiveness, efficiency, equity, and political feasibility. Concern about effectiveness, or how well a policy is working, is nearly universal. Because most









public policies, from defense to education, spend public money, analysts consider efficiency—what clients get for their money—to be just as important. Many also argue that equity, which concerns the fairness of government programs in relation to the needs of different groups in the population, should always be a concern; it comes up regularly in discussions of tax reform, for example, over whether proposed tax cuts benefit primarily the wealthy or the middle class. Of all the criteria discussed in the text, effectiveness, efficiency, and equity capture the most politically important standards used to judge policy proposals today.

It should be said that policymakers, interest groups, and analysts often favor use of one criterion over another without being very clear about why they do so. In the case of the energy policy debate summarized above, for example, advocates of offshore drilling emphasized the need to expand domestic oil supplies, a component of effectiveness. They said little about the relative efficiency of that strategy in relation to other policy options or even how likely it was that increased drilling would lower the price of gasoline, which was arguably the public's greatest concern at the time. On the other side of this debate, environmentalists challenged the likely effectiveness of a drilling strategy in relation to other policy options, such as increased fuel efficiency standards, but many emphasized even more what they viewed as the unacceptable risks of oil spills, made concrete by the BP Deepwater Horizon spill. Neither side made equity considerations a prominent part of its argument, although some opponents of drilling did note that U.S. consumption of oil was disproportionate to its population size (and hence unfair in a global context), which reinforced arguments for decreasing reliance on oil, whether produced domestically or imported. In the practical world of politics, policy actors use the arguments they think will best make their case without necessarily trying to address every consideration or every criterion.

Figure 6-1 lists these criteria along with four others often used in policy analysis and policy debate. The figure gives the meaning of each criterion and the limitations in using it as a standard of judgment. It also indicates the type of public policies for which it is most apt. Critics such as Deborah Stone (2012) underscore the inherent ambiguities and problems of interpretation associated with such criteria. These qualities need not prevent their use in practical policy analysis, but they do suggest the need to be alert to such limitations in how they are applied.

Typically, when these criteria are used, they must be expressed in terms of operational measurements or indicators, such as those discussed in chapter 5. For example, analysts usually speak of efficiency in terms of dollar cost in relation to the value of benefits expected to be realized from governmental action, such as improved workplace safety that might follow adoption of federal ergonomics standards, or the number of lives that would be saved through improvements in vehicle safety or actions against distracted driving. Effectiveness can be measured in terms of the likelihood of reaching a specific policy objective, such as reducing automobile accident rates by 20 percent over a five-year period or keeping the costs of health care from rising by more than the level of inflation.

Figure 6-1 Selected Criteria for Evaluating Public Policy Proposals

CRITERION	DEFINITION	LIMITS TO USE	WHERE MOST LIKELY USED
 Effectiveness	The likelihood of achieving policy goals and objectives or demonstrated achievement of them.	Estimates involve uncertain projection of future events.	Virtually all policy proposals where concern exists over how well government programs work.
 Efficiency	The achievement of program goals or benefits in relationship to the costs. Least cost for a given benefit or the largest benefit for a given cost.	Measuring all costs and benefits is not always possible. Policy decision making reflects political choices as much as efficiency.	Regulatory policies, such as consumer product protection, food safety, workplace safety, and environmental protection; consideration of market-based approaches.
 Equity	Fairness or justice in the distribution of the policy's costs, benefits, and risks across population subgroups.	Difficulty in finding techniques to measure equity; disagreement over whether equity means a fair process or equal outcomes.	Civil rights, disability rights, tax cuts for the well off and/or middle class, access to health services and higher education.
 Liberty/freedom	The extent to which public policy extends or restricts privacy and individual rights and choices.	Assessment of impacts on freedom is often clouded by ideological beliefs about the role of government.	Proposed national identification cards, restrictions on Internet use, property rights, abortion rights, regulatory actions that constrain choices of corporations and individuals.
 Political feasibility	The extent to which elected officials accept and support a policy proposal.	Difficult to determine. Depends on perceptions of the issues and changing economic and political conditions.	Any controversial policy, such as gun control, immigration, raising the gasoline tax, tax cuts for the wealthy, or subsidies for oil and gas drilling.
 Social acceptability	The extent to which the public will accept and support a policy proposal.	Difficult to determine even when public support can be measured. Depends on saliency of the issues and level of public awareness.	Any controversial policy, such as crime control or abortion rights, and from 2010 to 2013, health care reform.
 Administrative feasibility	The likelihood that a department or agency can implement the policy well.	Involves projection of available resources and agency behavior that can be difficult to estimate.	Expansion of agency duties, use of new policy approaches or new technologies, policies with complicated institutional structures.
 Technical feasibility	The availability and reliability of technology needed for policy implementation.	Often difficult to anticipate technological change that would alter feasibility.	Science and technology policy, environmental and energy policies, automobile safety regulations, telecommunications, defense policies.

For most of these criteria, multiple indicators are available, and analysts normally use several to compensate for the limitations of any one of them. Some criteria, however, involve making qualitative judgments rather than using such indicators, for example, when questions of equity arise or when the debate turns on the loss of personal liberty for the benefit of the larger public welfare. The personal liberty issues arise in controversies as diverse as gun control, freedom of religious practice, restrictions on private property rights, and actions to constrain possible terrorist activity. Indeed, they are a frequent subject of debate in nearly all areas in which government authority may impinge on individual rights. Recent proposals to reform the federal tax code involve questions of equity or fairness even if that criterion is not always made clear or the proposals are framed in terms of how they will affect economic growth or job creation.

Most policy debates resemble the battles over energy policy and gasoline prices; they involve multiple and competing criteria. Policymakers and analysts want policy action to be effective, but they also want to minimize costs, or to promote the most equitable solution, or to maintain individual rights against expansion of governmental authority. It is a rare policy action that can maximize each of these criteria simultaneously. Those concerned with public policy must therefore figure out which criteria are most important and use those preferences to rank policy alternatives from best to worst. In a more formal exercise, policy analysts might assign weights to each of the various criteria to reflect their relative importance. Then multiple criteria can be used at the same time to assess the attractiveness of different policy options. A brief discussion of the three most frequently used criteria should clarify their meanings and suggest how they might be used in policy analysis. The fourth major criterion, political feasibility, is addressed separately at the end of the chapter as part of a review of methods of policy analysis.

Effectiveness

The need for the effectiveness criterion is evident in the all-too-frequent complaints about the failure of government programs. Analysts and policymakers speak informally of what does and does not work, about policy success and the lack of it. In a narrow sense, effectiveness refers to reaching a policy or program's stated goals and objectives. For a program already in existence, evaluation of its effectiveness usually turns on whether it has achieved the expected results or policy outcomes. For example, does a city's use of school vouchers or charter schools raise the overall quality of education? (See chapter 10.) Or do federally funded abstinence-only programs to prevent teenage pregnancy—which have been enthusiastically backed by conservatives—actually produce lower rates of pregnancy? Nonpartisan analyses suggest they do not, and as a result, some states have chosen to turn down federal funds offered for such initiatives. In 2009, the Obama administration sought to curtail federal funding for the programs on the grounds that they were ineffective in reducing teen pregnancy; instead, it favored comprehensive sex education, as did many state legislatures.⁵

Assessments like these generally require that analysts develop suitable indicators or measurements for the specified outcomes. For a proposed policy rather than an existing program, they try to estimate the likelihood that such goals and objectives would be attained if the proposal were adopted. For example, in 2011, Google was quietly lobbying policymakers in Nevada to approve legislation that would make the state the first to permit self-driving cars to be used on public roads, which had been illegal in all fifty states. The proposal also would permit the car's occupants to send text messages even if sitting in the driver's seat. As was evident by 2016, professional transportation analysts consider self-driving cars a serious option for the future, and some vehicles, such as Tesla cars with Autopilot, already have much of this capability. Analysts anticipate ever-increasing congestion on public roads and thus the need eventually for smart roads and computer-driven or autonomous vehicles that will be able to move at high speeds with greatly reduced risk of accidents. Nevada approved Google's request, and in August 2016, Pittsburgh, Pennsylvania, allowed Uber to begin using experimental self-driving vehicles in the city, albeit with human supervisors in the driver's seat. If these experiments go well, we can anticipate self-driving delivery vans and big-rig trucks, all of which are expected to reduce the cost of transporting people and goods. Many also hope that such vehicles will spark other innovations in the application of artificial intelligence technology and be a critical element in future economic growth. These are among the reasons why the federal government in September 2016 announced its support for automated car technology by issuing formal guidelines for the new industry.⁶

The view of effectiveness we summarize here is a little narrow, however, because programs usually have multiple goals and objectives and may succeed at some and fall short on others. Moreover, some objectives may be attainable only over a long period of time, making assessment of short-term outcomes problematic. Another limitation is that estimating the probability that a proposal will be effective, or more effective than the present policy, requires a forecast of future conditions and events, an uncertain activity at best. In addition, analysts must learn to deal with a political environment in which politicians often exaggerate the weaknesses of current programs and tout the strengths of alternatives based more on ideological beliefs than any assessment of empirical evidence of program effectiveness.

On the plus side, the federal Government Performance and Results Act of 1993 requires regular evaluations of all existing programs and demonstrations of their performance or achievements. The act encourages agencies to focus on results, service quality, and public satisfaction, and it mandates annual performance plans and reports. The current political mood in Washington, D.C., and across the nation creates a strong expectation that new policy proposals will be able to meet the same standards of effectiveness as policies already in place or improve upon them. The economic recession that began in 2008 and subsequent soaring budgetary deficits reinforce these expectations at both the federal and state levels. With scarce budgetary dollars, policymakers are likely to be highly attentive to program effectiveness and eager to cut or terminate programs that

cannot prove their worth. Analysts who evaluate policy proposals in terms of likely effectiveness or who try to measure the achievements of existing programs therefore find a ready audience for their assessments.

Efficiency

If policy effectiveness is nearly universally expected in contemporary policymaking, so too is an interest in keeping the cost of government programs within reason. Whether efficiency is a specific measurement of costs in relation to benefits or gaining the most benefits for a fixed cost, the criterion amounts to the same thing. It strongly encourages analysts to think about the overall costs and benefits of existing programs and the various proposals to change them or replace them with something different.

Essentially, efficiency is a way of justifying government action on the basis of economic concepts. Sometimes efficiency is expressed in terms of the relative virtues of government intervention and the operation of a free market in promoting social welfare. As we discussed in chapter 1, government involvement may be called for when the market economy cannot adequately protect the public's well-being, for example, from crime, threats to national security, or urban air pollution. Efficiency is highly prized in the United States, and it is much praised by policy analysts (Stone 2012). Its role reflects the high value Americans place on a smoothly functioning market economy and the promotion of economic well-being.

The logic of efficiency in the allocation of scarce government resources is compelling. From an economist's perspective, fiscal resources must be used to best meet human needs—in other words, to increase the well-being of members of society. When the costs of programs are greater than the benefits, the possible alternative uses of the labor, capital, and materials are foregone, depriving society of their value (Patton, Sawicki, and Clark 2016; Weimer and Vining 2016). Thus if the government spends more on one activity—for example, prescription drug expenses under Medicare—than is needed to gain the benefits of the action—better health for senior citizens—it will have fewer resources for other services, such as public education and national defense. Similarly, policymakers may choose to reduce an agency's spending because it is politically popular to do so even when that action saves no money. For example, in recent years, Congress has cut the Internal Revenue Service (IRS) budget in a way that cost the government billions of dollars annually because the agency lacked the staff to collect taxes that are owed but not paid. A 2014 report on the IRS noted that for each additional dollar in its enforcement budget, the agency collects six more dollars in revenue, seemingly a very good deal unless one intensely dislikes the IRS and is inclined to cut its budget despite the lost revenue.⁷

A striking illustration of inefficiency came to light in late 2005 in a *New York Times* exposé of the New York State Medicaid program. The state's Medicaid spending on prescription drugs had doubled within five years, rising to \$3.8 billion in 2005, in part because the state was unwilling to constrain the soaring costs of

prescription drugs. As reporter Michael Luo put it, “New York lacks even the most basic controls that dozens of other states and private health insurers have used.”⁸ Among other examples of wasteful spending, the state was paying millions of dollars for prescription drugs for which far cheaper over-the-counter equivalents were available. It was also paying for some expensive drugs that experts said were largely ineffective and rarely approved for use in other states.

As the Medicaid spending example illustrates, application of the principle of promoting efficiency can be difficult, yet it is by no means impossible. Consider another example. The federal Centers for Disease Control and Prevention (CDC) reports that tobacco use in the United States is responsible for one out of five deaths annually, or 480,000 a year, 42,000 of which are attributed to second-hand smoke exposure; this amounts to 1,300 deaths every day. In addition, 16 million people suffer from at least one serious illness related to tobacco use, such as emphysema. What does smoking cost the country? The CDC says it amounts to more than \$300 billion a year. Some \$156 billion of that amount is attributed to lost economic productivity and \$170 billion to direct health care expenditures.⁹ Should government do more to restrict smoking to reduce these costs, particularly to lower the rate of smoking among young people? The CDC reports that each day about 3,200 people younger than eighteen years old smoke their first cigarette, and 2,100 youths or young adults who have been occasional smokers begin smoking on a daily basis. Or should all smokers, young and old, be left alone to make their own choices? Over the past decade, many states raised cigarette taxes, in part to discourage smoking and in part to raise revenue. The national average cost for a pack of cigarettes, counting all taxes, rose to more than \$6 in 2016, but the price varies widely by state and even by locality. In New York City, new taxes drove the price higher than \$14 a pack on average.

Calculating these kinds of social benefits and costs is not always easy, particularly when they must be expressed in dollar terms, although economists have developed a number of methods for doing so, as we will see later in the chapter. One could ask, for example, how analysts might estimate the economic and social advantages of illegal immigration as well as the costs that such immigration imposes on the United States and on the nations from which immigrants come. Can it be done? Should it be done? We can appreciate that putting a dollar value on costs and benefits in this case can be a challenge intellectually and politically. But what about a qualitative consideration? Either way, making the costs and benefits of policy action more explicit and more understandable should contribute to making smarter choices simply because the public and policymakers can be better informed.

Critics of the use of efficiency as a criterion argue that one important constraint is the fact that benefits and costs are not equally distributed among the population. Often, the benefits of policies such as agricultural subsidies or subsidized tuition for college students go to particular groups in the population, but all taxpayers bear the costs. For regulatory policies, such as controls on polluting power plants or regulation of Wall Street financial institutions, the larger society receives the benefits, but the corporate owners of the plant or banks—and the

Getting around a problem.

Even with recently low gasoline prices, many urban residents rely increasingly on bicycles to get around town. The photo shows the new bicycles that are part of LA Metro's Bike Share program, where up to 1,000 bicycles and up to 65 bike share stations were made available throughout the downtown area for the first time, in Los Angeles, California, on July 7, 2016. (Marcus Yam/Los Angeles Times via Getty Images)



stockholders—bear the costs. The implication of this critique is that analysts need to inquire into the distribution of benefits and costs as part of any attempt to examine economic efficiency and its acceptability. This is a subject addressed in the next section, about equity.

In fact, no matter what reservations are expressed about using the efficiency criterion in policy analysis and decision making, political reality dictates that it be addressed in some form. The smart analyst can find ways to do so that are reasonable and fair. Moreover, the great weight placed on policy costs today opens the door for creative ways to get policymakers and the public to think about the consequences of proposals under consideration. Actions that seem justifiable on some grounds might appear far less desirable once the costs of action are taken into account.

Equity

The term *equity* has at least two different meanings in contemporary policy debates: process equity and outcomes (end-result) equity. The first refers to the decision-making process that is used. Is it voluntary, open, and fair to all participants? If so, analysts and citizens might judge the results to be equitable even if some people ultimately fare better than others by gaining benefits such as higher education, better jobs, greater income, nicer houses, and so forth. This view is often associated with the political philosopher Robert Nozick and his book *Anarchy, State, and Utopia* (1974). Those who hold these views tend to believe strongly in the rights of individuals and the freedom to use and dispose of

their resources as they see fit. They resist government efforts to promote equality beyond ensuring equal opportunity to participate in society's decisions. As this description suggests, political conservatives identify strongly with the concept of process equity.

John Rawls promoted quite a different conception of equity, particularly in his book *A Theory of Justice* (1971). Rawls argued that equity or fairness refers to just outcomes or the fair distribution of societal goods such as wealth, income, and political power. His reasoning is that political institutions and social structures, such as racism and other forms of discrimination, affect the achievement of such goods. In other words, the acquisition of societal goods is not solely a function of the individual qualities of ambition, talent, and a strong work ethic. People who hold this view are more likely than others to favor government intervention to promote the equitable distribution of society's resources. Political liberals tend to identify with the concept of outcomes equity.

Equity criteria are likely to be central to any consideration of redistributive policies, such as tax reform, welfare reform, efforts to enhance access to education or health services, and assistance to the poor. They may also crop up in other policy areas where the debate and decisions turn on who gains and who loses as a consequence of policy action. The policy analyst might want to ask who receives the benefits of policy action, who does not, and who pays for the costs of the program. *Who* in this context means not individuals, but different groups or categories of people. They can be wealthy, middle class, or poor; city dwellers or suburbanites; ordinary people or huge corporations. Equity issues are pervasive in policy disputes, from tax reform proposals to actions that might restrict access to higher education—such as raising tuition levels.

Concern for economic inequality rose sharply in 2011 and continues to be an issue, as evidence mounted that both wealth and income in the United States had become increasingly unequal, and as the nation's policymakers continued to debate the merits of tax cuts and other economic policy as part of the larger deficit reduction goals. Across the country, the Occupy Wall Street movement addressed what participants viewed as an unacceptable level of inequality and opportunity for economic advancement between the top 1 percent of the population and the remaining 99 percent. In late 2011 in a widely reported speech in Kansas, President Obama focused on data showing that in the last three decades the average income of the top 1 percent in the nation had gone up by more than 250 percent, to \$1.2 million a year. In contrast, for most taxpayers in the same period, income hardly rose at all over the level of inflation.¹⁰ Presidential candidate Bernie Sanders focused heavily on this kind of economic inequality in his campaign for the Democratic Party nomination in 2016. Consistent with the president's argument, the Organisation for Economic Co-operation and Development (OECD) announced late in 2011 that income inequality in the United States was at its highest in over thirty years; was continuing to rise; and was greater than in all developed countries other than Chile, Mexico, and Turkey.¹¹

This kind of concern over economic inequality has long been a fixture of economic policy, particularly fiscal policy (see chapter 7), and it is likely to continue

as policymakers at both federal and state levels debate how to deal with deficit spending. Tax reform measures are certain to be part of that discussion, as they have been over the past decade. For example, one of the most striking debates during the 2000s was what to do about the federal estate tax, a tax on property that is imposed when the owner dies, and which is paid by the heirs to the estate, typically other family members. Using the kind of issue framing we discussed in chapter 3, conservative critics have called the estate tax a “death tax,” and have argued that it is unfair to family members and owners of small businesses. They would prefer to have the tax fully repealed even though doing so would be very costly for federal revenues. Not surprisingly, liberals have argued that repealing or weakening the estate tax is also inequitable because most of the benefits would go to the very wealthy.

Should the estate tax be kept and applied to most families out of concern for social equity and sound fiscal policy? Should it be repealed so that even the richest families can leave most of their wealth to their children? Or should the tax be imposed only on estates above a particular monetary level so that most families and small businesses are exempt, and if so, what level would be fair to taxpayers? In 2013, Congress increased the size of an estate that is exempt to \$5 million for individuals and \$10 million for couples, levels that it also chose to peg to inflation so they will rise over time; for 2016, the level for couples to pay no estate tax had risen to \$10.9 million. As a result, 99.8 percent of families will face no estate tax at all.¹² Was this an acceptable compromise? Was it too generous to wealthy families at the expense of others?

Ethical influences on public policy. Some public policy alternatives historically have been evaluated using ethical criteria rather than economic efficiency, political feasibility, or other standards. Women's health care and reproductive rights are examples. The photo shows pro-choice and pro-life activists demonstrating on the steps of the U.S. Supreme Court on June 27, 2016, in Washington, D.C. In a 5–3 decision, the U.S. Supreme Court struck down one of the nation's toughest restrictions on abortion, a Texas law that women's groups said would have forced more than three-quarters of the state's clinics to close. (Pete Marovich/Getty Images)



Ethics and Political Values

In a classic essay on the role of principles in policy analysis, political theorist Charles W. Anderson (1979, 713) argued that there are “certain fundamental considerations that must be accounted for in any policy evaluation.” This “repertoire of basic concepts” includes “authority, the public interest, rights, justice, equality, and efficiency.” They are, Anderson said, not simply an analyst’s preferences but “*obligatory* criteria of political judgment.”

In the practical world of policy analysis, some of Anderson’s requisite criteria or standards of policy judgment are likely to be ignored. Indeed, some political scientists argue that it is unnecessary or even improper for policy analysts to include ethical or normative dimensions in their work. They say this in part because they think ethics and normative values, such as liberty and equality, are beyond the bounds of rational analysis. Or it may be that they believe analysts are incapable of objective analysis because they inevitably inject their personal biases into any such assessment. Some also argue that analysis of normative values is unnecessary because the political process exists to address and resolve ethical and value disputes (Amy 1984). An easy rejoinder to the last argument is that explicit analysis of ethics and values could greatly enhance the quality of argument and debate in policymaking bodies. No doubt, it is easier for analysts to stress criteria such as effectiveness and efficiency, where an assessment can be based on hard data such as measurable costs and benefits. Normative issues, however, deserve serious consideration. As Anderson (1979) argues, analysis that ignores basic issues such as the role of government authority, individual rights, or the public interest is incomplete and inadequate.

Policy debates over personal privacy (for example, cell phone records), property rights, copyright laws, research on human stem cells derived from embryos, and many other contemporary issues clearly require an assessment in terms of normative and legal criteria, not just economics. Even for a seemingly technical subject such as nuclear waste disposal, it is both possible and necessary to analyze ethical issues such as the effects on future generations, whether it is fair for governments to offer monetary compensation to communities if they agree to host a waste repository, and how much public involvement in decision making should be required (Kraft 2000; Shrader-Frechette 1993; E. Weiss 1990).

As this review of evaluative criteria indicates, there are many different bases on which to analyze policy. Students of public policy should be aware of the range of standards that are applied and alert to their strengths and limits and the trade-offs between them. Sometimes, promoting the public’s welfare—for example, through food safety, consumer safety, or environmental protection policies—imposes a cost on individuals and corporations. Restrictions on their freedom or liberty may be justified by the public’s gains. Conversely, at times the protection of individual rights and liberties is so important that society is willing to tolerate activity that many people find abhorrent. Thus Internet pornography is protected because of the First Amendment’s free-speech guarantees, and the

Constitution extends elaborate protections to those accused of criminal behavior, even for horrific crimes such as serial murder or terrorism.

A recent decision in election law illustrates the importance of how these competing criteria, particularly the right to free speech and the broader public welfare, are used and assessed. The Supreme Court decided in early 2010 in the case of *Citizens United v. Federal Election Commission* that spending money on election campaigns is a form of protected free speech under the First Amendment. Therefore the government cannot prevent corporations or unions from spending their money to support or criticize candidates. The corporations and unions cannot give the money directly to candidates (which is prohibited by campaign finance laws), but they can spend as much as they desire on television and other ads intended to influence voters. The controversial ruling led many to complain that the Court's decision protects the free-speech rights of corporations (and unions) over the broader citizen interests in having competitive and fair election campaigns. Then in a related ruling in 2014, *McCutcheon v. Federal Election Commission*, the Court struck down long-established limits on what one person could donate to federal candidates and political parties in each election cycle. The result was a surge in contributions by, and presumably political influence of, wealthy individuals and families.¹³

The use of diverse evaluative criteria can help in another way. Too often policymakers, analysts, and commentators make statements that reflect their strong ideological beliefs when they discuss pending policy choices. Liberals know what they like and dislike and apply those philosophical standards to the full range of contemporary policies, and conservatives do the same, although both sides would have much to gain from dispassionate assessments of current government programs and proposed policies. An objective analysis of this kind could be grounded in one or more of the evaluative criteria described in this chapter. Doing so does not mean that citizens and policymakers need to abandon their convictions about what government should or should not be doing. Rather, it means that they ought to be sure they have the facts about a given issue, be it school vouchers, gun control, or health care alternatives, and think about a range of considerations in addition to their personal values and policy beliefs. They will have an easier time defending the position they take, and the policy positions they endorse will stand a better chance of success.

Using the Methods of Policy Analysis

This section of the chapter surveys the most frequently used methods of policy analysis and highlights their strengths and most significant weaknesses or limitations. The suggested reading list at the end of the chapter provides substantial coverage of analytic methods. Those wishing to read further will find this list a good place to start. The leading methods of policy analysis draw heavily from economics and focus on the evaluative criterion of efficiency, particularly for cost-benefit and cost-effectiveness analyses (Dunn 2016; Weimer and Vining 2016). The ideas found in

these and related methods are useful even for nontechnical analysis. The methods are tools for critical thinking about public policy that anyone can use.

By now, however, it should be clear that public policy evaluation is about more than economics. It is also about effectiveness, equity, liberty, and, fundamentally, politics. As stated earlier, analytic methods can be used to clarify problems and policy choices, but decisions about which policies to adopt or maintain are up to policymakers and, ultimately, up to the public that elects them.

The overview of analytic methods that follows groups them into four categories. One is economic approaches that include cost-benefit analysis, cost-effectiveness analysis, and risk assessment methods. Another is decision making and impacts, which includes forecasting and impact assessment. A third is political and institutional analysis, which includes assessment of political feasibility as well as policy implementation and program evaluation. The last category is ethical analysis, where the concern is consideration of the ethics of policy action.

Economic Approaches

As discussed earlier in the chapter, economic analysis pervades the study of public policy, and for good reason (Weimer and Vining 2016). Public policies can be expensive, and in ways that are sometimes not so obvious to the public and policymakers. Use of economic approaches can help us understand the real costs of government programs and the trade-offs involved in choosing one policy alternative over another. As we have seen, however, economic analysis also has its critics, who worry that emphasis can be placed too much on the dollar value of government action and too little on what they see as the necessity of addressing some public needs regardless of cost. A review of the most frequently used economic approaches is helpful for appreciating both the strengths and limitations of such methods.

Cost-Benefit Analysis

Most readers are already familiar with **cost-benefit analysis**, also called benefit-cost analysis, and they use the techniques even if they do not use the terms. When a high school senior decides which college to attend, he or she probably makes a list of the advantages and disadvantages of each important option. One college offers a stronger program in the student's area of interest, but it is expensive. Another is affordable but falls a little short on the number of courses in the anticipated major. In addition, the student considers the differences in the range of campus activities, housing, sports facilities, and other qualities of college life. How to make this decision? The student, probably with the help of a counselor and parents, weighs the advantages and disadvantages of each, perhaps writing them down in several columns to compare the choices. Cost-benefit analysis is simply a more systematic method for doing the same thing.

One economist described cost-benefit analysis as follows:

It seeks to determine if the aggregate of the gains that accrue to those made better off is greater than the aggregate of losses to those made worse off by the policy choice. The gains and losses are both measured in dollars, and are defined as the sums of each individual's willingness to pay to receive the gains or to prevent the policy-imposed losses. If the gains exceed the losses, the policy should be accepted according to the logic of benefit-cost analysis. (A. Freeman 2000, 192)

He added that in some respects cost-benefit analysis is “nothing more than organized common sense,” even if the term usually refers to a more narrowly defined and technical calculation.

The usefulness of thinking in terms of what public policies and programs cost and what society gets from them should be clear enough. Consider the enormous costs inflicted by Hurricane Katrina in 2005. Over 1,300 people lost their lives, and many thousands lost their homes and businesses, suffered pain or trauma, or had their lives otherwise uprooted. The economic impact on both New Orleans and the nation was substantial, and it continued for years. In addition, highways, utilities, schools, and other public structures in New Orleans and other cities had to be rebuilt at considerable expense, easily over \$100 billion in repairs and reconstruction costs. What would it have taken to provide greater protection for the New Orleans area by building stronger flood levees and improving the city's emergency preparedness capacity? Surely a great deal less than \$100 billion. Most estimates were in the range of a few billion dollars. Indeed, following Katrina, one expert on cost-benefit analysis, Harvard economist W. Kip Viscusi, said the comparison of costs and benefits “was not a close call.” Instead, it was “a no-brainer that you do this,” meaning to invest in a much larger flood-prevention effort.¹⁴

Short of Category Five (the most severe) hurricanes, there are plenty of examples of routine policy decisions that are equally instructive on the value of thinking about costs and benefits. Consider the costs of protecting the U.S. border. In one case, the government spent nearly \$1 billion on a new virtual border fence project that proved to be ineffective and was abandoned.¹⁵ Should the initial cost estimates have ruled this out? What about the Obama administration's ambitious efforts to foster the development of a high-speed rail system in the United States to rival those that have operated for years in China, France, Japan, Spain, and elsewhere?¹⁶ Was the initial federal investment of \$8 billion for fiscal 2012 a wise decision? What about the anticipated total of \$53 billion over six years? Would the long-term societal benefits be far greater than the costs? How would we go about determining that? House Republicans voted in November 2011 to kill the program, unconvinced that it served the national interest, and Republican governors in some states, such as Wisconsin, rejected the federal funds to develop high-speed rail, convinced that in the long run such an initiative was not justifiable.¹⁷

Or consider the cost of the Iraq war and the broader war on terrorism. Should we place a dollar value on protecting the nation from terrorists? What about launching and continuing a war in another country such as Iraq? At the beginning of the Iraq war in 2003, President George W. Bush assured Congress and the nation that under the “worst case” assumptions the war would cost no more than \$200 billion, reflecting confidence at that time that it would be relatively short and successful. Yet by the tenth anniversary of the terrorist attacks in New York, Pennsylvania, and Washington, D.C., the *New York Times* and a number of independent economists concluded that costs of the war on terrorism, including the cost of fighting in Iraq and Afghanistan, had reached \$3.3 trillion.¹⁸ Other estimates were even higher, depending on what was counted. For example, the U.S. government has tended not to count long-term costs such as care for returning veterans, many of whom will require lifelong medical treatment. Should costs like this be a factor in the decision to go to war, or in decisions to continue a war for a long period of time?

Conducting a cost-benefit analysis is relatively straightforward in theory. The analyst (1) identifies all the important long-term and short-term costs and benefits; (2) measures the tangible costs and benefits in monetary terms; (3) uses a discount rate, which adjusts for changes in value over time, to ensure that all are expressed in commensurable terms; (4) estimates the intangible or qualitative considerations; and (5) aggregates, or totals, the costs and benefits.

This total is expressed in one of two ways: as the net benefit (benefits minus costs) or as the ratio of benefits to costs (the benefits divided by the costs). The box “Steps to Analysis: Conducting a Cost-Benefit Analysis” indicates how it is done, and policy analysis texts provide many other examples (e.g., Boardman et al. 2011; Gupta 2011). Public policy students might try to apply these methods to a particular problem—perhaps a current campus issue such as whether to expand parking lots or to provide incentives to students, faculty, and staff to use other means of transportation to reach the campus. In this particular case, thorough analysis suggests the virtue of trying to discourage automobile use on economic as well as environmental grounds (Toor and Havlick 2004).

Some of the limitations of cost-benefit analysis are evident even in the brief summary provided here and in the fuel-tax example used in the box. Determination of what costs and benefits are important enough to be included is in part a judgment call. Measuring them in monetary terms is easier for some costs and benefits than others. The analyst may emphasize costs because they are more identifiable and measurable. What the benefits turn out to be is less certain and may be realized only after a period of time. Economists often try to estimate **opportunity costs**, which refer to the value of opportunities that are forgone when time or resources are spent on a given activity. For example, being stuck in traffic imposes an opportunity cost on drivers because they could be doing something more productive with their time. Federal regulations that require companies to spend more than necessary on safety or environmental regulations impose an opportunity cost because this money might have been invested in additional research, plant modernization, enhanced employee benefits, and so forth.

Steps to Analysis

Conducting a Cost-Benefit Analysis

Conducting a cost-benefit analysis can be a fairly simple or quite complicated process, depending on the issue. In general, an analyst completes the following procedure:

1. Identify all of the important costs and benefits.
2. Measure those costs and benefits that can be expressed in dollar terms and either estimate or acknowledge those that cannot be measured easily.
3. Adjust the measurements for changes in value over time.
4. Sum up and compare all the costs and benefits and conclude whether the costs outweigh the benefits or vice versa.

Let us apply these steps to a policy example.

1. **Identify all of the important costs and benefits.** Consider the U.S. federal gasoline tax, which is the lowest among the world's industrialized nations. Those who support raising it contend that doing so would yield many tangible benefits, among them lowering the country's dependence on imported oil. It would reduce urban air pollution and improve public health; reduce carbon dioxide emissions and the risk of climate change; cut back on traffic congestion and drive time; and lessen traffic accidents, thereby saving lives and preventing injuries. A higher gas tax could yield all of these benefits and substantially increase government tax revenues by internalizing the social costs of driving and providing an incentive to people to drive fewer miles or seek alternative forms of transportation. Raising the gas tax, however, imposes direct costs on drivers and on a variety of services that depend on transportation, and it can have a particularly adverse impact on

low- and moderate-income citizens who have few alternatives to using automobiles, and on those who live in sparsely populated areas where they need to drive and who also may travel long distances.

2. **Measure those costs and benefits that can be expressed in dollar terms and either estimate or acknowledge those that cannot be measured easily.** Because a complete cost-benefit analysis of raising the gasoline tax can become exceedingly complicated, we consider a study that took on only part of the challenge. In a paper prepared for Resources for the Future (RFF), Ian Parry and Kenneth Small examined many of these costs in an effort to determine the "optimal" level for a gasoline tax in the United States. Although economists cannot easily measure all of the benefits noted, they have estimated that the pollution damages amount to about 40 cents a gallon, the carbon dioxide emissions 6 cents a gallon (estimates vary widely here), traffic congestion about 70 cents a gallon on average, and traffic accidents 60 cents a gallon, for a total of \$1.76 a gallon. To take into account that gasoline taxes actually tax the fuel purchased as opposed to the distance that is traveled and some of the negative economic effects of raising fuel taxes, the analysts lowered this amount to about a dollar per gallon (Parry 2002).
3. **Adjust the measurements for changes in value over time.** In this example, no such adjustment is made. All costs and benefits are assumed to apply to the present. Conceivably, however, one could make such adjustments for those benefits expected to come only in the future, such as the value of reducing expected climate change from buildup of carbon dioxide emissions. The adjacent text discusses how such "discounting" of future benefits is done.
4. **Sum up and compare all the costs and benefits and conclude whether the costs outweigh the benefits or vice versa.** The study reached its conclusion about an optimal level of taxation

without considering the economic costs of dependence on foreign oil, which another study estimated to be around 12 cents a gallon; the military costs of defending access to Middle Eastern oil fields; or the damage caused by the production, transportation, and use of gasoline—such as oil spills and leaking storage tanks. Some environmental groups have tried to estimate all of those effects and, not surprisingly, came out with a much higher total. Still, according to the RFF analysis, the dollar-per-gallon optimal tax that would internalize the major social costs is more than twice the average combined federal and state taxes on gasoline in the United States, which in 2016 totaled about 48 cents per gallon.

- Would you change any of the major social costs considered in this analysis?
- Are there other costs and benefits that should be considered if the gasoline tax is to be raised?
- Do you think that economists can fairly estimate the dollar value of things like improved public health because of reduced air pollution or the value of time lost by those stuck in traffic?
- Does the conclusion of the study present a cogent argument for raising gasoline taxes?

Source: Ian W. H. Parry, "Is Gasoline Undertaxed in the United States?" *Resources* 148 (summer 2002): 28–33.

Using a **discount rate** allows analysts to determine the value of future benefits today, but the choice of the rate, essentially an estimate of inflation over time, clearly can have a profound impact on the results. For example, consider the present value of \$100 earned a hundred years from now, with varying assumptions of a discount rate. At a 1 percent discount rate, that \$100 is worth \$36.97; at 2 percent, \$13.80; at 3 percent, \$5.20; and at 5 percent, only \$0.76. As these calculations illustrate, distant benefits may be of minimal value in current dollars, and a cost-benefit analysis can therefore yield wildly different results depending on the rate selected.

Because the choice of a discount rate can have a great effect on how one appraises policy options, that choice underlies innumerable conflicts over government policy decisions, from protection against hurricanes like Katrina or efforts to reduce the risk of future climate change. The benefits of preventing damage from hurricanes or of slowing or halting global climate change are real and often substantial, but they may occur so far in the future that discounting the benefits to today's values tends to minimize them in a cost-benefit calculation. In contrast, the costs of hurricane damage mitigation or dealing with climate change can be quite large, and they will be paid for in today's dollars. These complications lead economic analysts to suggest other methods for discounting in a responsible way that consider long-term costs and benefits.¹⁹ Yet, as noted above, at least one calculation in the aftermath of Katrina did employ such discounting and nonetheless concluded that the benefits of a massive investment in disaster prevention could easily have been justified on economic grounds.²⁰ Many public officials in New York drew similar conclusions about the logic of spending now on infrastructure improvements that could help to minimize the economic costs in the future should a storm like 2012's Hurricane Sandy strike

the area again; that storm caused an estimated \$70 billion in damages to New York and New Jersey.²¹

Another vulnerable part of the process of cost-benefit analysis is the estimate of intangible human costs and benefits, such as well-being, aesthetic preferences, or even the value of a life or of human suffering. Some analysts choose not to include them at all in a cost-benefit analysis and instead highlight that omission in reporting the results. Others prefer to use available economic methods to estimate intangible or nonmarket values and then include them in the cost-benefit analysis. For example, economists use techniques known as **contingent valuation methods**, which are essentially questionnaires or interviews with individuals, designed to allow an estimate of the dollar value of the time spent stuck in traffic or the preservation of lakes or forests. If done well, such methods can provide a useful estimate of the value people attach to certain intangibles. The use of **sensitivity analysis** can minimize to some extent the weaknesses inherent in cost-benefit analysis. When the calculations are “sensitive” to a basic assumption such as the chosen discount rate, the analyst can report on several different rates, and the reader can choose the assumptions that seem most reasonable.

Even with its obvious limitations, cost-benefit analysis is a powerful tool that is widely used in government decision making. It forces analysts and policymakers to define what they expect government action to do (produce benefits) and to consider the costs associated with that action. If done properly, cost-benefit analysis can help justify public policy that might otherwise be ignored or challenged. Consider the case of lead in gasoline and its effect on public health. During the 1980s, the Environmental Protection Agency (EPA) asked for a reduction in the amount of lead allowed in gasoline from 1.1 grams per gallon to 0.1 grams; lead was used to boost the octane level of gasoline. The benefits of controlling lead in this way included a reduction in adverse health and cognitive problems in children, a lowered level of high blood pressure and cardiovascular disease in adults, and reduced automobile maintenance costs. Not all of those benefits could be measured, but counting those that could produced a benefit-cost ratio of 10 to 1 (A. Freeman 2000, 194). That calculation helped gain approval for eliminating lead in gasoline despite opposition from automobile companies and oil refineries and the Ronald Reagan administration’s concerns about the action. Lead was completely eliminated from U.S. gasoline by 1996, and it also has been phased out of gasoline nearly all over the world, often with dramatic effects on children’s health.²²

Critics of cost-benefit analysis claim that the method can be abused if only some costs and benefits are considered and inappropriate measures are used to estimate their value (Stone 2012; Tong 1986). Their concerns are genuine, even though in the real world of policy debate, it is likely that analysts on both sides of the policy question will carefully scrutinize any cost-benefit analysis. Moreover, the Office of Management and Budget (OMB) has set out elaborate guidelines that federal government agencies are expected to follow for the conduct of such studies.

OMB’s Office of Information and Regulatory Affairs (OIRA) has been in charge of this process since President Reagan’s 1981 executive order mandating

that economic analysis be used to justify proposed regulations. Each successive president has established a similar review process, albeit with differing guidelines and expectations, and the agencies have improved their ability to conduct them. Under legislation approved in 2000, the Data Quality Act, OIRA is also charged with establishing guidelines for how agencies ensure the accuracy of the data on which regulations are based.²³ Despite these expectations and procedures, the public policy student should always ask about the underlying assumptions in a cost-benefit analysis and how the costs and benefits were estimated. As noted in several other examples, estimates of a new government regulation's future costs often reveal very wide ranges, indicating that the analysts used quite different assumptions and calculations.

Cost-benefit analysis is used less in areas of public policy where such measurements are not readily available. Even in these areas, however, one could carry out a kind of qualitative cost-benefit analysis in which the important benefits and costs are listed and considered, but without an attempt to place a dollar value on them. Such an exercise might allow citizens, analysts, and policymakers to think comprehensively about the pros and cons of government policies for which they have either no dollar estimates of costs or only partial information.

Cost-Effectiveness Analysis

Sometimes the concerns about the ability to measure the benefits of a policy action are so significant that cost-benefit analysis is not useful. For example, many policies, such as health regulations, highway safety, and medical research, may prevent disease or devastating injury, and may save lives. But how do analysts place a dollar value on human life and health? Government agency officials and analysts, along with insurance companies, have methods for estimating how much a life is worth, even though many critics object in principle to making such calculations (Tong 1986). The advantage of **cost-effectiveness analysis** is that it requires no measurements of the value of intangible benefits such as human lives; it simply compares different policy alternatives that can produce these benefits in terms of their relative costs. That is, analysts are asking which actions can save the most human lives given a fixed dollar cost, or which dollar investments produce the greatest benefits.

For example, in the early 1990s, Oregon created a prioritized list as part of the Oregon Health Plan, which chiefly serves the state's Medicaid beneficiaries. The plan ranked 709 medical procedures "according to their benefit to the entire population being served." Coverage was to be provided for all conditions that fell above a threshold on the list, and the state legislature was to determine the cutoff points each year on the basis of estimates for health care services and budget constraints. The state used a cost-benefit methodology to establish the list, consulting fifty physician panels and surveying the Oregon public. The choices were based on factors such as the likelihood that treatment would reduce suffering or prevent death, the cost of care, and the duration of benefits. In effect, the state

was trying to determine how to get the greatest benefit to society from the limited resources available for health care. As might be expected, the state's innovative approach was highly controversial, and the federal government initially rejected it, but it later approved a modified form.²⁴ Oregon modified the plan in 2012, and transferred the prioritization of health services to a Health Evidence Review Commission, whose members are appointed by the governor and confirmed by the state senate. The plan also was expanded to cover a larger number of individuals and families under the state's Medicaid program as part of its response to the Affordable Care Act of 2010. Is such a cost-effective approach to state health care benefits a good idea? What are its strengths and weaknesses?

Similar comparisons are also common in safety and environmental regulation, where the cost of the regulations in terms of lives that would be saved is often ten, one hundred, or even one thousand times greater than other actions that could be taken. In these circumstances, critics of regulation cite the wide disparities in costs to argue against the adoption of measures aimed at, for example, improving workplace safety or eliminating toxic chemicals from the environment. Or they suggest that the same benefits might be achieved by taking other, sometimes far cheaper, action (Huber 1999). One recent example concerns directives from the Federal Emergency Management Agency (FEMA) in 2004 that pressed cities and states in earthquake-prone areas, including Memphis and other communities close to the New Madrid Seismic Zone (located near parts of Arkansas, Illinois, Indiana, Kentucky, Mississippi, Missouri, and Tennessee), to set building construction standards comparable to those required in California. Yet according to critics, FEMA proposed the plan "with almost no consideration of costs and benefits," even though the risk of a major earthquake in this area was only one-tenth to one-third that of California's. The critics suggest that the same money invested in such health and safety measures as highway upgrades, flu shots, and heart defibrillators could save many more lives.²⁵

Risk Assessment

Risk assessment is a close relative of cost-benefit analysis. Its purpose is to identify, estimate, and evaluate the magnitude of the risk to citizens from exposure to various situations such as terrorism, natural hazards such as hurricanes and flooding, radiation from nuclear power plants, or threats from the kind of financial risks that Wall Street investment banks took in the mid 2000s at the height of the housing bubble. Reducing risks conveys a benefit to the public, and this benefit can be part of the calculation in a cost-benefit analysis. But societal risks vary widely in their magnitude, and that is the reason to try to identify and measure them; the more significant risks presumably should receive a higher priority for government action. Risks are associated with many activities in daily life, such as driving a car, flying in an airplane, consuming certain foods, smoking cigarettes, drinking alcohol, and skiing down a mountain, among others. Most of life's risks are fairly minor and not especially alarming, although people may worry a great

deal about the ones they understand least well and fear, such as hazardous waste, toxic chemicals, and radiation.

Consider this example of risk assessment. In late 2002, the Federal Aviation Administration (FAA) proposed a new regulation that would require airlines to build safer seats to reduce the risk of severe injury or death in the event of an accident. Under the proposal, the airlines would have fourteen years to develop and install the new seats, at an estimated cost of \$519 million. The seats would have better belts, improved headrests, and stronger anchors to hold them to the aircraft floor under the stress of an accident. The FAA's risk assessment indicated that the new seats would prevent an estimated 114 deaths and 133 serious injuries in the twenty years after the regulation took effect.²⁶ Was the FAA's risk assessment reasonable? Is it possible to project accident rates, injuries, and deaths over twenty years when the technology of aircraft design and other elements in aviation safety, not just the seat design, is likely to change?

Other examples of risk analysis are intriguing, even in the early stages of development. For example, over the past decade, the National Highway Traffic Safety Administration (NHTSA) has been studying the feasibility of requiring automobiles to have vehicle-to-vehicle communication technology (called V2V). Doing so, the agency says, could dramatically reduce the risk of accidents and therefore save lives and prevent injuries. Agency research shows that the vast majority of accidents can be prevented through use of such technology, in which vehicle sensors and onboard computers either alert drivers to an impending accident or move the vehicle out of the way to avoid an accident, much like automatic braking and lane departure warning systems already do in vehicles equipped with those technologies. Potentially such a change could save thousands of lives each year in the United States, and prevent hundreds of thousands of injuries, not to mention lowering the costs of vehicle repairs. Over thirty-three thousand people a year die in automobile accidents today, and over two million are injured, many severely. Ultimately, the adoption of new safety requirements will have to be justified through some form of risk-cost-benefit analysis.²⁷

Risk assessments of this kind are widely used today in part because of public fears of certain technological risks and the adoption of public policies to control or reduce these risks (Kraft 2017). Workplace safety and food safety are two examples. Risk assessments are also prepared to estimate and respond to national security risks, such as terrorist attacks or other threats to the United States. Throughout the Cold War period, from the late 1940s to about 1990, defense and security analysts regularly made assessments of the risk of nuclear war and other security threats. They continue to conduct similar studies today.

Risk is usually defined as the magnitude of adverse consequences of an event or exposure. As noted, the event may be an earthquake, flood, car accident, nuclear power plant accident, or terrorist attack, and an exposure could come through contaminated food, water, or air, or from being in or near a building or another structure under attack (Andrews 2006b; Perrow 2007). The public's concern about risk has deepened in recent years as the media have increased their coverage of these situations. Books on this topic seem to sell well, another indicator of public concern.²⁸

Professionals view risk as a product of the probability that the event or exposure will occur and the consequences that follow if it does. It can be expressed in the equation $R = P \times C$. The higher the probability of the event or exposure (P), or the higher the consequences (C), the higher the risk (R). Some risks, such as an airplane crash, have a low probability of occurring but high consequences if they do. Others, such as a broken leg from a skiing accident, have a higher probability but lower consequences. People tend to fear high-consequence events even if their probability is very low, because they focus on what *might* happen more than on its likelihood. Partly for this reason, there is often a substantial difference between experts and the lay public in their perception of risks. Public fear of nuclear power and nuclear waste (which experts tend to think are small risks) is a good example (Slovic 1987).

People also underestimate much more significant risks, including climate change, natural disasters, and medical calamities such as pandemics. In the case of the latter, in 2011 experts were so concerned about the risk that they warned scientific journals not to publish details about biomedical experiments that could be exploited by terrorists.²⁹ Even experts sometimes seriously misjudge risks, as the National Aeronautics and Space Administration (NASA) did in managing the space shuttle program. After two catastrophic accidents, in 2005 NASA recalculated the risk of a major failure during a space shuttle mission using probabilistic risk assessment that combined actual flight experience, computer simulations, and expert judgment. It put the risk at a very high 1 in 100.³⁰

The tendency of people to misjudge the probability of various events is evident in the purchase of lottery tickets. When the Powerball lottery jackpot rose to an astonishing \$1.6 billion in early 2016, people turned out in droves to buy tickets, even though they were far more likely to die from falling out of bed than to win even a portion of the lottery jackpot. The odds of winning the full amount that year were less than 1 in 292 million, whereas lottery officials calculated that the odds of being hit by an asteroid or comet were 1,000 times better.³¹

People also greatly underestimate risks associated with the U.S. food supply. The CDC reported in 2016 that about one in six Americans, or about 53 million people, get sick; about 128,000 are hospitalized; and about 3,000 die each year in the United States from food poisoning.³² Yet except for the occasional scare over peanut butter, chicken, ground beef, eggs, or various vegetables that could be contaminated, the American public does not seem to be overly concerned about food safety. Nonetheless, in late 2010, Congress approved the Food Safety Modernization Act to ensure that the U.S. food supply is safe. The act was designed to shift the emphasis to prevention of contamination from response to it. Among other provisions, the act requires the Food and Drug Administration (FDA) to establish “science-based standards for the safe production and harvesting of fruits and vegetables to minimize the risk of serious illnesses or death.”³³

If risk assessment is the use of different methods to identify risks and estimate their probability and severity of harm, **risk evaluation** is a determination of the acceptability of the risks or a decision about what level of safety

is desired. Typically, higher levels of safety, or lower risk, cost more to achieve. **Risk management** describes what governments or other organizations do to deal with risks, such as adopting public policies to regulate them (Presidential/Congressional Commission on Risk Assessment and Risk Management 1997).

Analysts use many different methods to conduct risk assessments, ranging from estimating the likelihood of industrial accidents to calculating how much radioactivity is likely to leak from a nuclear waste repository over thousands of years. For some assessments, such as the risk of automobile accidents or the likely injury to children from deployment of airbags during an accident, the task is relatively easy because plenty of data exist on the actual experience of drivers, vehicles, and airbag deployment. As a result, insurance companies can figure out how much to charge for car insurance once they know the age of the driver, what kind of car is in use, and where and how far it is driven each day. For other estimates, the lack of experience means that analysts must depend on mathematical modeling and computer projections, for example, to project the risk of climate change and the consequences for society if average temperatures rise, rainfall patterns shift, or severe storms occur more frequently.³⁴

As with cost-benefit analysis, conservatives and business interests have long favored the use of risk assessment methods for domestic policy conflicts. They believe that many risks that government regulates are exaggerated and that further study will show they are not worth the often considerable cost to society (Huber 1999; Wildavsky 1988). It is equally likely, however, that risk assessments will identify genuine and serious risks to public health and welfare that merit public policy action.

The great loss of life and severe property damage inflicted by Hurricane Katrina in New Orleans and other Gulf Coast areas in late August 2005; similar damage from a severe tornado outbreak in the spring of 2011, which killed over three hundred people in six states; and comparable storms in 2016 also illustrate the policy challenges of risk assessment and risk management. How much more should state and local governments do to try to anticipate the risks of natural hazards such as hurricanes, tornadoes, earthquakes, and heavy rainstorms and the floods they create? If emergency preparedness officials and others are able to forecast such events, and thus provide some basis for judging the severity of possible risks, what obligations do the various levels of government have to protect their citizens? In retrospect, many state and local officials in the Gulf states in 2005, and many in the federal government as well, either did not pay sufficient attention to the risk of major hurricanes in the area or failed to implement adequate disaster preparedness measures. Even when the levees in New Orleans collapsed after Katrina struck the city, responsible officials in Louisiana and in Washington, D.C., did not act quickly enough. Warnings about floodwaters entering the city were misunderstood or ignored. The consequences in the case of Katrina and a later storm, Rita, were tragic because most of the loss of life and damage could have been prevented with better planning and a more timely response to the flooding. That need still exists because climate change forecasts suggest that the intensity of the 2005 hurricanes may be repeated in future years.

The decision-making process.

During 2014, the failure of General Motors (GM) to issue timely recalls on cars with significant safety issues was frequently in the news, and also attracted much attention on Capitol Hill. Senate Consumer Protection Subcommittee Chair Sen. Claire McCaskill, D-Mo., holds up a document as she questions GM CEO Mary Barra in Washington on April 2, 2014, during a hearing on GM. McCaskill said the new GM, which emerged from bankruptcy in 2009, had ample time to recall cars equipped with a faulty ignition switch that was linked to at least thirteen deaths. GM began recalling the cars only in February 2014, more than a decade after it learned of the ignition switch problem.

(AP Photo/Pablo Martinez Monsivais)



Decision Making and Impacts

Throughout the text, we have emphasized the centrality of decision making in the study of public policy. The methods discussed in this section focus on formal ways to model the choices that policymakers face as well as techniques to consider how information about possible future events can be brought into the decision-making process. By introducing new perspectives and information in this way, the hope is that policymakers and the public can better determine which policy alternatives hold the most promise.

Forecasting

In chapter 5, we discussed the logic of forecasting in terms of understanding how present problems, such as public demand for Social Security and Medicare benefits, might change over time as the number of senior citizens increases. We also referred to it just above in our discussion of the risk of hurricanes striking the Gulf Coast states. Forecasting can be defined as “a procedure for producing factual information about future states of society on the basis of prior information about policy problems.”³⁵ That is, forecasting methods allow analysts to anticipate what the future is likely to hold based on their understanding of current conditions and how they expect them to change over time. This information can be exceptionally valuable because public problems are dynamic, not static. In other words, when policymakers aim at public problems, they face a moving target.

In the cases of Social Security and Medicare, each program produces annual reports that include updated estimates of future demand for these services as well as estimates of the economic gap between the cost of providing the services and the expected revenues to cover those costs. Agency officials and other experts say both programs face enormous shortfalls in the future. They also argue that making long-term forecasts that look ahead seventy-five years, even with some degree of uncertainty, is essential to provide critical information for policymakers.³⁶

For example, the population of the United States was about 325 million in 2016, but what will it be in twenty-five or fifty years? The U.S. Census Bureau (www.census.gov) has a population clock that reports continuously on the changing U.S. and global populations. It also offers several different projections of the nation's future population. All of these projections depend on a series of assumptions about the average number of children each woman is likely to have, the rate of immigration, and other factors. The bureau offers four different scenarios, with alternate assumptions. The medium projection is most widely cited, and it indicates that the United States has been growing by about 0.7 percent a year. At that rate, the bureau has estimated a U.S. population of about 360 million in 2030 and 396 million in 2050.³⁷ Cities and states that are growing more rapidly—or more slowly—than the nation as a whole find their specific forecasts helpful in determining how to cope with the anticipated demand for public services.

Projections of what is usually called geometric or exponential growth, such as population growth, are fairly easy once one knows the rate of growth. It is the same equation used to determine compound interest: $A_n = P(1 + i)^n$, where A is the amount being projected, n is the number of years, P is the initial amount, and i is the rate of growth. The formula is quite handy for determining how much a given amount will grow in one, five, or ten years. A savings account deposit of \$100 (P) that grows at 3 percent a year will be worth \$103 after one year, \$116 at the end of five years, and \$134 after ten years. As this example illustrates, even a small rate of annual increase can produce sizeable changes over time.³⁸

Most forecasting is more complex than the examples provided here, but the principles are the same. Forecasting can include a variety of quantitative methods, such as econometric models for estimating future economic growth and job creation. Qualitative, or intuitive, methods are also widely used. These include brainstorming, the so-called Delphi method of asking experts to estimate future conditions, scenario development, and even simple monitoring of trends that looks for signs of change (Patton, Sawicki, and Clark 2016; Starling 1988).

As one might guess, whether quantitative or qualitative, forecasting methods are necessarily limited by available data, the validity of the basic assumptions made in projecting the future from present conditions, and how far out the projection goes. A look backward to earlier forecasts is sobering.³⁹ Quite often the futurists have been dead wrong in their projections, sometimes spectacularly so. For example, during the 1970s, electric power companies believed that energy demand would grow indefinitely at 6 percent to 7 percent a year. They planned

for and built power plants that turned out not to be needed, and in some cases drove the power companies into bankruptcy.

Lest we think that forecasts about technological change are inevitably better today, it is worth noting that even as late as 1990, few analysts anticipated the explosive demand for home personal computers, not to mention the proliferation of smartphones and inexpensive laptop and tablet computers that spread computing and communication far from the office and home. Development of the Internet throughout the 1990s was a major reason for that rapid growth, as were falling computer prices and the development of easy-to-use web browsers. Even in the business community, where the ability to make accurate forecasts is essential for a company's success, hundreds of major firms and thousands of start-up companies greatly overestimated the demand for Internet business services, and many did not survive the dot-com implosion of the late 1990s. To compensate for these kinds of egregious forecasting errors, most analysts recommend using a number of forecasting methods, in the hope that a few of them will come up with comparable findings and increase confidence in the results. Even with the qualifications that should always accompany forecasting studies, being able to anticipate societal changes and prepare for them is a far better strategy than being surprised when problems develop.

Impact Assessment

During the highly contentious debate in 2002 over oil and gas drilling in the Arctic National Wildlife Refuge (ANWR), proponents of drilling repeatedly cited a 1990 economic study suggesting that opening the refuge for commercial oil production would create some 735,000 jobs. Independent economists said that number was suspect because the assumptions on which it was based were probably no longer valid. Indeed, a separate study prepared for the DOE in 1992 indicated that approximately 222,000 jobs would result, but only when ANWR reached peak production; the jobs would be chiefly in construction and manufacturing. Environmentalists argued that the correct number was lower still, perhaps 50,000 jobs. The wide variation in estimates of job creation may seem to indicate that analysts are unable to forecast economic impacts very well, but the real lesson is probably that studies of this kind may be seriously flawed because of the fanciful assumptions they make. Policy advocates often are more interested in scoring political points in a highly contentious debate than in arriving at a sound estimate of these jobs.

Given the concern in recent years over persistently high unemployment, estimates of new job creation become even more central in policy debates. Conservatives have criticized government regulations as “job killers” and tout tax cuts and deregulation for their potential to create jobs. In 2011, for example, many Republicans argued that Congress should not impose additional taxes on “job creators”—that is, on wealthy individuals and corporations. Yet citation of studies on how much impact regulations or taxes actually have on

job creation was rare.⁴⁰ This kind of job impact analysis should be relatively straightforward for economists who work with models of the U.S. economy. Such an analysis merely asks what difference a given action, such as cutting specific regulations or reducing certain taxes, would have on the economy, and job creation in particular.

Job impact studies like this are one kind of **impact assessment**. Others include technology impact analysis, environmental impact analysis, and social impact analysis. They are similar in that analysts share an interest in trying to project or predict the consequences of adopting a policy proposal or taking some other form of action. Robert Bartlett (1989, 1) describes the approach this way: “Impact assessment constitutes a general strategy of policymaking and administration—a strategy of influencing decisions and actions by a priori analysis of predictable impacts. A simple, even simplistic, notion when stated briefly, making policy through impact assessment is in fact an approach of great power, complexity, and subtlety.”

Much like forecasting, the purpose of an impact assessment is to see if analysts can systematically examine the effects that may occur from taking a certain action. That action may be introducing or expanding the use of new Internet technologies or deploying a national missile defense system. No matter the subject, the analyst tries to identify possible impacts and the likelihood they will occur.

Impact assessments are not new. Federal law has required environmental impact analyses since the National Environmental Policy Act (NEPA) was passed in 1969. The logic was simple and powerful. Before governments undertake major projects that are likely to have significant effects on the environment, policymakers ought to identify and measure those impacts, and they also ought to consider alternatives that may avoid the undesirable effects. The law’s strength is in its requirement that the impact assessments be made public, which creates an opportunity for environmental groups and others to influence agency decision making. The agency, in turn, is forced to deal with a concerned public and to respond to the information produced by the impact assessment. The hope was that the combination of information and political forces would “make bureaucracies think” and dissuade them from making poor decisions that could harm the environment. Evaluations of NEPA indicate that it has been quite successful on the whole (Caldwell 1998).

Political and Institutional Approaches

At this point in the chapter, the reader may be wondering whether policy analysis ever considers more than economic and technical estimates. The answer is clearly yes. Political scientists in particular are likely to use political and institutional approaches to understanding proposed policy alternatives and to evaluating existing programs. Such studies are often more qualitative than the methods discussed so far, but they may also be just as rigorous and just as valuable for understanding public policy.

Political Feasibility Analysis

Political feasibility, a criterion for evaluating suggested policy changes, as discussed earlier in the chapter, is the extent to which elected officials and other policy actors support the change. No formula is available for estimating political feasibility. Even experienced and thoughtful observers of politics acknowledge how difficult it is to determine the level of support that might be forthcoming for a proposal in local or state government, or at the national level. It may be easier to recognize the actions that are unlikely to fly politically, particularly in a time of intense political polarization in the nation that often makes it extremely difficult to build support for controversial actions (Mann and Ornstein 2012; Persily 2015; Thurber and Yoshinaka 2015). Examples are plentiful. The Affordable Care Act passed Congress with not a single Republican vote in favor, and a Republican House voted over sixty times to repeal the act. Comprehensive immigration reform, which the Senate managed to pass in 2013, was blocked by concerted Republican opposition in the House. This kind of polarization and gridlock lies behind the sharp rise in public frustration with government today, as noted earlier in the text.

Aside from partisan differences, interest group influence can make even broadly supported public policy actions unlikely to be successful. Gun control measures are a classic example of that pattern. The vast majority of Americans and even members of the National Rifle Association (NRA) support many gun control measures, such as enhanced background checks and barring people on terrorist watch lists from purchasing guns. Yet proposals of this kind have failed to gain traction because they are opposed by the NRA and elected officials fear the group's electoral wrath. This is why, despite many cases of mass shootings, Congress has been unwilling to approve additional gun control measures, and why it also has banned federal funding for research on gun violence.⁴¹

One of the most notable cases occurred after the shootings at Sandy Hook Elementary School in Connecticut in late 2012. President Obama mounted a campaign to improve gun safety laws, with emphasis on criminal background checks for all gun sales, reinstatement of a ban on assault weapons, and limiting ammunition magazines to ten rounds; however, he was unable to secure congressional approval. Additional mass shootings since that time, such as the attack on a nightclub in Orlando, Florida, in June 2016 that killed forty-nine people and injured more than fifty others, have not altered the political calculation as the NRA continues to maintain its opposition to these kinds of measures.

At the margins of policy debate, however, it may be possible to anticipate how slight changes in proposed legislation or regulations, or an alteration in the political or economic environment, can create a majority in favor of action. Sometimes a shift on the part of a few legislators or a marginal change in policymaker perceptions of what the public will support make the difference in the success or failure of a policy proposal.

Some simple determinations can provide a good idea of political feasibility. Analysts could begin by identifying the policy actors who will likely play a significant role in the decision. These actors may be members of a city council or

a state legislature, or they may be members of Congress. To the formal policy-makers, analysts would add other players, such as representatives of major interest groups and administrative officials—for example, the mayor, the governor, and top officials in a pertinent bureaucracy. For each of the major policy actors, analysts could determine their positions on the issues, perhaps by investigating their previous stances, such as the NRA's opposition to gun control measures or business groups' reluctance to endorse action on climate change. Sometimes it is possible to estimate their positions based on their party affiliation, general political attitudes, and where they stand on comparable issues. Finally, an estimate can be made of their level of interest in the particular decision (how salient it is to them), and the intensity of their views or their motivation to get involved in the decision. These factors are likely to be shaped by the level of interest and preferences of the constituencies they represent, which in turn are influenced by how much the media cover the controversy and how the issues are presented. All of this information can be pulled together to estimate political feasibility.

We need to bear in mind that not all policy actors are equal in influencing feasibility. Relatively small groups with intensely held views on a subject are often capable of defeating proposals that have the broad support of the U.S. public. As noted, gun control is a policy area where this has long been the case, but there are many other examples. For a great many public policy disputes, especially those that do not rise to the highest levels of visibility, political feasibility is likely to depend on the views of a small number of people and organizations.

Implementation Analysis and Program Evaluation

The discussion of **implementation analysis** and the related program evaluation is relatively brief here because these methods are covered in the substantive policy chapters that follow. As is the case with assessment of political feasibility, these methods draw far more from the disciplines of political science and public administration than is true for most of the others reviewed here.

Policy implementation is one of the most important steps in the policy cycle, and one that often gets insufficient attention by analysts and policymakers. Enactment of any public policy is only one part of policymaking, as we discussed in chapter 3. Policies must be put into action by administrative agencies, and this involves judgment about what the policy calls for; adoption of pertinent rules, regulations, and guidelines; and the use of resources (staff and money) to carry out the critical components of the policy. Sometimes the process goes smoothly and sometimes not, and thus policy success depends on how well implementation goes (Patashnik 2008).

Consider the initial implementation of the Affordable Care Act (or Obamacare) in late 2013, which did not go at all well. The federal government had rushed to set up its webpage for enrollment in the program (www.healthcare.gov), relied too much on outside consulting companies for its development, did not test the site sufficiently before it went live, and failed to establish clear lines of oversight for its operation. As a result, the site was technically flawed in many respects, and it

proved to be unable to handle the large volume of applications. Implementation of the act was further compromised when many states chose not to establish their own insurance exchanges under the law, throwing many more people onto the problematic federal exchange, and some states actively sought to undermine the act because of political disagreement with it.⁴² After an urgent and massive effort by the Obama White House and the Department of Health and Human Services to repair the site, enrollment under the health care law went much more smoothly late in 2013 and early in 2014, and ultimately it did manage to meet the government's initial projections. Nonetheless, the law's longtime critics were quick to remind voters of these many failures, and they continued to call for the law's repeal. Students of public policy were handed a prime example of why implementation analysis is essential for program success.

As this case illustrates, policies are almost never self-implementing, and many circumstances can affect their success: the difficulty of the problem being addressed, the soundness of the initial policy design, the suitability of the statute's objectives and legal mandates, and multiple political, economic, and institutional factors. These include an agency's resources and technical capabilities, the commitment and skills of its leadership, the degree of public and political support, and influence from affected constituencies (Goggin et al. 1990; Mazmanian and Sabatier 1983).

Implementation analysis is based on the assumption that it is possible to identify some of the likely challenges either in advance of a policy's adoption or after implementation begins. In the first case, the analysis can help in the design of the policy to ensure that it can be implemented well. In the second, the analysis can document how well implementation has gone and the aspects of the policy or the parts of the implementing agency that are responsible for any success or failure. Policies can then be modified as needed. Initial policy failures can be reversed if policymakers understand the reasons and are prepared to take corrective action. It is not unusual that major policies need to be evaluated over time, and this kind of revision undertaken (Mazmanian and Sabatier 1983). The Affordable Care Act may well be one example, as its initial years of implementation did not fully yield the results hoped for, whether the problems were chiefly in the initial policy design or in the extensive and often relentless criticism directed at the act, and even efforts by opponents to block its success (see chapter 8).

Program evaluation focuses more on policy results or outcomes than on the process of implementation, but as noted, the two go together. Evaluation of any program may be an essential part of long-term implementation success, and there are many different ways to evaluate a program.

Most evaluations rely on a diversity of methods to identify a program's goals and objectives, measure them, gather data on what the program is doing, and reach some conclusions about the extent of its success (Rossi, Lipsey, and Freeman 2004; C. Weiss 1997). For example, we can ask how well immigration policies are doing in terms of limiting illegal immigration to the United States or their success in providing for high-demand employment in technical areas where the number of qualified U.S. citizens is insufficient. In both cases, we would gather information on the outcomes we expect to see, such as reduced immigration rates, or

whether high-demand employees are indeed being recruited in sufficient numbers. Or we can ask about the extent to which health care policies are working in terms of meeting specific outcome measures such as the number of people previously without health insurance who became covered, a key object of the Affordable Care Act of 2010 (see chapter 8). For environmental and energy policies, we would want to determine if they are meeting specific goals, such as improvement in air quality or drinking water quality, or development of wind and solar power or expansion of nuclear power (see chapter 11). For education policies, we would seek data on educational outcomes to judge whether certain reforms, such as creation of charter schools, make a difference (see chapter 10).

As with other policy analyses, the intention is to complete those tasks in a systematic way that fosters confidence in the accuracy of the results (Rossi, Lipsey, and Freeman 2004). Done well, the studies sometimes make a real difference. Despite the many criticisms of the Affordable Care Act, for example, it did succeed in insuring many people who previously had no health care coverage, and thus in improving their access to health care services. The Department of Health and Human Services touted these kinds of achievements, as well as others, in its reports on the act's impacts.⁴³ For other policies, evaluation studies sometimes point to their ineffectiveness, suggesting that new approaches need to be tried, a question that we emphasize throughout the rest of the text. For example, analysis revealed that, after years of increased funding, the nation's most popular program to discourage drug use among schoolchildren was ineffective. As a result, the U.S. Department of Education announced that its funds could no longer be used on the Drug Abuse Resistance Education, or DARE, program, which had paid for police officers to visit schools to convey antidrug messages.⁴⁴

Ethical Analysis

As noted in this chapter, many policy analysts view **ethical analysis**, or the systematic examination of ethical or normative issues in public policy, as problematic. Because they are not quite sure how to do it and sometimes fear that entering the quagmire of ethics compromises the objectivity of their analysis, they often leave ethical issues to the policy advocacy community. Ethical issues most definitely are raised as part of policy debate, but they may not receive the kind of careful analysis that we have come to expect for economic issues or even for political and institutional issues (Tong 1986).

Two brief examples, however, illustrate the need for ethical analysis. The first involves family planning programs. The George W. Bush administration, much like other Republican administrations since the mid 1980s, was under pressure from antiabortion groups to curtail U.S. contributions to the United Nations Population Fund. The fund supports family planning programs around the world, but some people accuse it of condoning abortions. It has repeatedly denied those charges and has assured the U.S. government that none of the nation's funds will be used in support of abortion, which U.S. law forbids. Responding to political

pressure from the antiabortion lobby, in 2002 Bush withheld \$34 million from the UN program, which amounted to 13 percent of the agency's total budget. According to an agency spokesperson, the effect of a \$34 million cut "could mean 2 million unwanted pregnancies, 800,000 induced abortions, 4,700 maternal deaths, and 77,000 infant and child deaths."⁴⁵ Note the qualification of "could mean" in this statement. It is difficult to project the consequences of the budget cut because other groups might make up some of the difference of the funds withheld. For example, the Population Fund and other organizations concerned about family planning services could ask their members for increased donations for this purpose. Even so, one could ask how likely the Bush administration's action was to achieve its goal of reducing abortions. If the consequences were even close to what the UN official indicated, was the administration's action largely symbolic and political, but one with detrimental consequences for public health? Can the decision be justified in terms of moral or ethical criteria?

The second example concerns the dramatically altered circumstances of airline travel in the aftermath of the September 11, 2001, terrorist attacks. Federal law required random searches of individuals and carry-on luggage at the initial security checkpoint. Federal officials were concerned that if they adopted a system of passenger profiling based on demographic characteristics—that is, groups of people who might require special screening, such as young Arab men—they would violate principles of civil liberties. Civil libertarians argued that racial or ethnic profiling should be unacceptable in a free society that values diversity, and many found that view persuasive.

The federal government opted for a system of random checks without profiling, but many experts said that while such a system has little chance of preventing hijacking, it imposes high costs and inconvenience on travelers. What is the most acceptable way to promote airline security? Does profiling travelers violate their civil liberties? Even if it did, is this practice a justifiable use of government authority to protect the country? In 2014, the Obama administration announced new restrictions on racial profiling by federal officials, but also said that some officers and Department of Homeland Security agents would be allowed to continue to use some forms of profiling, particularly when screening airline passengers and guarding the southwestern border.⁴⁶ Was this the decision justifiable on ethical grounds?

Other contemporary policy issues, from human cloning and embryonic stem-cell research to how to deal with illegal immigration, raise comparable ethical and value concerns. By 2016, many states had adopted laws to govern research on embryos and fetuses, and some of them chose to ban any experiments involving human embryos.⁴⁷ Was this position reasonable? Opponents of these laws argued that they could seriously impede important medical research.⁴⁸ Indeed, in 2002, California enacted legislation to explicitly allow research on stem cells that are obtained from fetal and embryonic tissue, a direct repudiation of federal limits on such research imposed by the Bush administration in 2001 (though lifted by President Obama in early 2009). Antiabortion groups and the Roman Catholic Church opposed California's action.⁴⁹

Steps to Analysis

Ethical Analysis: The Case of Organ Donation

A recent assessment of human organ donation to save lives contained some striking data and offered a creative solution, but one with ethical implications. Every day in the United States, more than seventy-nine people receive an organ transplant, but about eighteen die because there are not enough donor organs to meet the demand. In 2016, more than 119,000 people in the United States were waiting for an organ transplant, and one more is added every ten minutes. People's dire medical conditions do not allow them to wait indefinitely. Indeed, since 1995, more than forty-five thousand Americans have died while waiting for a suitable donor organ to become available; currently about twenty-two people in this situation die each day.

The shortage is not because people are opposed to organ donation in principle. In fact, the overwhelming majority of Americans (about 95 percent of adults) approve of organ donation. But only about 45 percent sign up to donate their organs (such as hearts, kidneys, lungs, and livers) upon death, a number that varies widely by state; only about 13 percent of New York State residents have signed up as donors whereas 80 percent of Alaskans have. Unfortunately, the number of transplant operations has remained flat for years while the number of people needing organ transplants has risen significantly.^a

So how might the number of available organs be increased? Current U.S. policy requires an affirmative step of signing an organ donation card or registering online for donation (and generally notifying family members of one's intention). But what if the policy were flipped so that the default position is that organs are suitable for donation unless an individual opted out by indicating that he or she did *not* want to be an organ donor, for example, because of strong religious beliefs? What difference would that make?

Experience in Europe provides some answers. Two quite different approaches are used for what could be termed a "no-action default" policy, where an individual's failure to make a decision results in a given condition. In one recent assessment, twenty-four European countries (including Austria, Belgium, France, Spain, and

Sweden) were found to rely on "presumed consent," where people are deemed organ donors unless they have registered not to be. Others follow the U.S. approach, where "explicit consent" is required; that is, no one is assumed to be an organ donor unless he or she has registered to be one. In Europe, the effective percentage of organ donors in the first case is between 86 and 100 percent, but in the second case it ranges from 4 to 27 percent. The implication is that a change in approach within the United States could result in thousands of additional organ donations a year, and thus in thousands of lives that would be saved, although there is much debate about all of the consequences of such a change.

Should the United States change its policy to one of presumed consent? Issues of individual freedom and social equity or justice are central to how one answers that question. What arguments, particularly those grounded in ethical concerns, would you make in support of that change? Should the United States continue to rely on the explicit consent model? What arguments would you make in support of this position?

- What does this exercise tell you about the possibility or desirability of analyzing ethical issues in public policy?
- Should analysts try to address ethical issues like this?
- Can that be done as professionally as conducting cost-benefit analysis or assessing political feasibility?

Sources: Eric J. Johnson and Daniel Goldstein, "Do Defaults Save Lives?" *Science* 302 (November 21, 2003): 1338–1339; Tiffanie Wen, "Why Don't More People Want to Donate Their Organs?" *The Atlantic*, November 10, 2014; www.organdonor.gov (official U.S. government website for organ and tissue donation and transplantation); and www.unos.org (United Network for Organ Sharing). For a broader discussion of organ transplantation in the United States in relation to the broader concern over health care services, see David L. Weimer, *Medical Governance: Values, Expertise, and Interests in Organ Transplantation* (Washington, D.C.: Georgetown University Press, 2010).

- a. See the U.S. government's website on organ donation: www.organdonor.gov. One reason for the low number of transplant operations despite the need is that only about three in one thousand people die in a way that permits organ transplants.

The “Steps to Analysis” box “Ethical Analysis: The Case of Organ Donation” offers an intriguing policy question for which ethical analysis would be appropriate.

Conclusions

This chapter describes the leading evaluative criteria in the study of public policy, with special emphasis on effectiveness, efficiency, political feasibility, and equity concerns. All policy analysis relies on such evaluative criteria to judge policy proposals, even if they are not always made explicit, and these are among the most important of the criteria commonly used. The chapter also briefly reviews the major kinds of policy analysis and their strengths, weaknesses, and potential contributions to the policymaking process. Students of public policy should understand that analysts select from these criteria and methods, with significant implications for the breadth and utility of their findings. They should also be alert to the assumptions and choices made in such studies and ask how they affect the validity of the conclusions reached.

The chapter emphasizes that policy analysis is both a craft and an art. The craft comes in knowing the methods of policy analysis and how to apply them in specific situations. For example, when would you use one of the economic approaches, such as cost-benefit analysis or risk analysis? When would you use analysis dealing with decision making or the impacts of policy, such as forecasting? When instead would you rely on political feasibility analysis or ethical analysis?

The art of policy analysis lies in selecting suitable criteria for policy assessments, in recognizing the limitations of the available methods, and in drawing and reporting on appropriate conclusions. An artful policy analyst recognizes and is sensitive to the public mood and the political and institutional context in which the analysis is conducted and reported. He or she may also find ways to use policy analysis to empower citizens and motivate them to participate in the democratic process (deLeon 1997; Ingram and Smith 1993).

Some critics of policy analysis complain that analysts tend to view politics—that is, public opinion, interest group activity, and the actions of policymakers—as an obstacle to adopting the fruits of their labors, which they believe represent a rational, and therefore superior, assessment of the situation (Stone 2012). It is possible, however, to view the relationship of policy analysis and politics in a different light. Analysis and politics are not incompatible as long as it is understood that analysis by itself does not and should not determine public policy. Rather, its purpose is to inform the public and policymakers so that they can make better decisions. A democratic political process offers the best way to ensure that policy decisions further the public interest (Lindblom and Woodhouse 1993).



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DISCUSSION QUESTIONS

1. Which of the many evaluative criteria do you think are the most important? Economic costs or efficiency? Policy effectiveness? Equity? Why do you think so? Are some criteria more important for certain kinds of policy questions than for others?
2. Discuss how you would go about applying cost-benefit analysis to one of the following issues: (1) instituting a campus program for recycling paper, aluminum cans, and similar items; (2) getting a city to build bicycle lanes on selected streets to promote safety for cyclists; or (3) increasing the number of crossing guards at roadway intersections close to elementary schools. What steps would you go through, and what kinds of data would you need to conduct such an analysis?
3. Choose one of the following examples relating to the use of ethical analysis: budgets for family planning programs, restrictions on using embryonic stem cells for medical research, profiling in airport security screening, or an opting-in system for organ donation. How would you apply ethical analysis to clarify the policy choices involved in that case?
4. If you had to forecast changing student demand for programs of study at a college or university for the next ten to twenty years, how would you go about doing that?
5. What are the most important factors to consider in conducting a political feasibility analysis? Answer this with respect to a specific example, such as instituting a tax on carbon-based fuels as one response to climate change, cutting mandatory prison sentences to lower the cost of keeping non-violent offenders in custody, or providing tuition-free education at public colleges and universities.

KEYWORDS

contingent valuation methods 198	ethical analysis 211	risk assessment 200
cost-benefit analysis 193	impact assessment 207	risk evaluation 202
cost-effectiveness analysis 199	implementation analysis 209	risk management 203
discount rate 197	opportunity costs 195	sensitivity analysis 198
	program evaluation 210	

SUGGESTED READINGS

Eugene Bardach and Eric M. Patashnik, *A Practical Guide for Policy Analysis: The Eightfold Path to More Effective Problem Solving*, 5th ed. (Thousand

Oaks, Calif.: CQ Press, 2016). A concise and helpful handbook on the basics of conducting and presenting policy analysis in the real world.

Dipak K. Gupta, *Analyzing Public Policy: Concepts, Tools, and Techniques*, 2nd ed. Thousand Oaks, Calif.: CQ Press, 2011). A comprehensive and readable text that introduces the methods of policy analysis, including a discussion of basic statistics, forecasting, decision theory, game theory, and cost-benefit analysis.

Carl V. Patton, David S. Sawicki, and Jennifer J. Clark, *Basic Methods of Policy Analysis and Planning*, 3rd ed. (New York: Routledge, 2016).

David L. Weimer and Aidan R. Vining, *Policy Analysis: Concepts and Practice*, 6th ed. (New York: Routledge, 2016). One of the leading policy analysis texts, drawing heavily from economics.

SUGGESTED WEBSITES

www.aei.org. American Enterprise Institute, one of the most visible and influential conservative research organizations in Washington, D.C.

www.americanprogress.org. Center for American Progress, a progressive, nonpartisan policy research institute in Washington, D.C.

www.appam.org. Association for Public Policy Analysis and Management, which offers guides to careers and education in public policy.

www.brookings.edu. Brookings Institution, one of the most widely cited public policy organizations in Washington, D.C., that engages in a wide range

of research, from economic analysis to work on U.S. government and politics.

www.cato.org. Cato Institute, a prominent libertarian and conservative think tank in Washington, D.C.

www.opm.gov/qualifications/standards/Specialty-stds/gs-policy.asp. The U.S. Office of Personnel Management webpage, offering a description of policy analysis positions in government.

www.rff.org/Research_Topics/Pages/SubTopics.aspx?SubTopic=Benefit-Cost%20Analysis. Selected cost-benefit analyses done at Resources for the Future.

NOTES

1. On the effects of the new fuel economy standards, see Thomas L. Friedman, "This Is a Big Deal," *New York Times*, December 4, 2011.
2. Lena H. Sun, "On the Mass Transportation Bandwagon: Record Ridership Shows Continued Popularity of Leaving the Driving to Someone Else," *Washington Post National Weekly Edition*, December 15–21, 2008; and Peter S. Goodman, "Fuel Prices Shift Math for Life in Far Suburbs," *New York Times*, June 25, 2008.
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 13. Adam Liptak, "Justices, 5–4, Reject Corporate Spending Limit," *New York Times*, January 21, 2010; and Liptak, "Supreme Court Strikes Down Overall Political Donation Cap," *New York Times*, April 2, 2014.
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 19. See Paul R. Portney, "Time and Money: Discounting's Problematic Allure," *Resources* 136 (Summer 1999): 8–9. See also Paul R. Portney and John P. Weyant, eds., *Discounting and Intergenerational Equity* (Washington, D.C.: Resources for the Future, 1999).
 20. Rauch, "The Loss of New Orleans."
 21. "Hurricane Sandy's Rising Costs," *New York Times*, November 27, 2012.
 22. See the EPA fact sheet on lead in the environment; the actions taken to ban or reduce its presence; and its effects, particularly on children: www.epa.gov/haps/health-effects-notebook-hazardous-air-pollutants. See also the Global Lead Network for information on global action to remove lead from the environment: <http://globalleadnet.com/36/about-the-network>.
 23. The new guidelines for agency scientific data were pushed through Congress as a rider attached to a fiscal 2001 appropriations bill in late 2000,

- largely at the request of business and industry groups, and signed by President Bill Clinton. Business groups have long maintained that many government regulations are based on faulty data, and the law will make it easier for them to challenge regulations they view as burdensome. See Rebecca Adams, "OIRA Directs Guidelines on Data Quality," *CQ Weekly*, March 23, 2002, 827. For a review of the kinds of government regulation that OIRA studies and how it calculates costs and benefits, see the OMB website for OIRA (available at www.whitehouse.gov/omb) and the dedicated site for regulatory review (www.reginfo.gov/public/). Note that both sites may change in the Trump administration.
24. See Richard Conviser, "A Brief History of the Oregon Health Plan and Its Features" (Salem: Office of Oregon Health Policy and Research, 1995). The Oregon experience is examined in detail in Peter J. Neumann, *Using Cost-Effectiveness Analysis to Improve Health Care: Opportunities and Barriers* (New York: Oxford University Press, 2004). See also a recent review of the Oregon experiment that argues it has met the "test of time" and is something of a model for new efforts for the kinds of comparative effectiveness studies called for under the Affordable Care Act of 2010: Somnath Saha, Darren D. Coffman, and Ariel K. Smits, "Giving Teeth to Comparative-Effectiveness Research: The Oregon Experience," *New England Journal of Medicine* 362 (February 18, 2010).
 25. See Seth Stein and Joseph Tomasello, "When Safety Costs Too Much," *New York Times*, January 10, 2004, A31.
 26. The proposal can be found at the FAA website: www.faa.gov.
 27. See "U.S. Department of Transportation Announces Decision to Move Forward with Vehicle-to-Vehicle Communication Technology for Light Vehicles," available at the NHTSA website: www.nhtsa.gov.
 28. For example, a book published a year after the September 11 terrorist attacks discusses public anxiety over unfamiliar and highly publicized risks and attempts to assess the true risk: David Ropeik and George Gray, *Risk: A Practical Guide for Deciding What's Really Safe and What's Really Dangerous in the World around You* (Boston: Houghton Mifflin, 2002). The book sold briskly at Amazon.com and Barnes and Noble's online site.
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 30. See William J. Broad, "NASA Puts Shuttle Mission's Risk at 1 in 100," *New York Times*, July 26, 2005, A16.
 31. The odds are taken from Larry Laudan, *The Book of Risks: Fascinating Facts about the Chances We Take Every Day* (New York: Wiley, 1994), as cited in a May 20, 1998, CNN story, when an earlier Powerball lottery jackpot reached \$175 million. See also Lizette Alvarez, "The Biggest Powerball Jackpot Ever: The Odds and Where the Money Goes," *New York Times*, January 12, 2016.
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 33. The quotation comes from the FDA publication "Food Safety Legislation Key Facts," available at www.fda.gov/Food/GuidanceRegulation/FSMA/ucm237934.htm.
 34. To see how climate change modeling estimates such risk, see the website for the Intergovernmental Panel on Climate Change: www.ipcc.ch.
 35. The quotation is from William J. Dunn, *Public Policy Analysis: An Introduction*, 3rd ed. (New York: Longman, 2004), 130.
 36. Edmund L. Andrews and Robert Pear, "Entitlement Costs Are Expected to Soar," *New York Times*, March 19, 2004.
 37. The Census Bureau webpage has these kinds of forecasts, for example, in its National Population Projections. An easier way to see the estimates for the United States and to compare them to other nations is to view the annual World Population

- Data Sheet published by the Population Reference Bureau and available on its website: www.prb.org.
38. A compound interest calculator is available on the web at <https://illuminations.nctm.org/Activity.aspx?id=3568>. To use it, enter a principal amount of money, a contribution amount, an interest rate, and the number of years the money will be invested, and immediately see how much the initial amount changes over this time period—in both tabular and graphic formats.
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