

Chapter 5

Clubs and Externalities

While it is evident that some goods and services may be reasonably classified as purely private, even in the extreme sense, it is clear that few, if any, goods satisfy the conditions of extreme collectiveness.

—James M. Buchanan, “An Economic Theory of Clubs” (1965)

The term “public goods” is often used to describe goods that, once produced, can be consumed with equal enjoyment or satisfaction by many people. The premier example is national defense. If the government provides military protection to some individuals in a geographic area, others in that area will be equally protected. Another example is roads. Streets and highways built for some drivers can be used by others. Libraries are another example, in that a library built for some people can then be used also by other people. Parks, once produced, can be open to everyone. This way of looking at goods divides them sharply into two distinct categories: public goods and private goods.

Private goods, like a sandwich, are consumed by one person. If you eat a sandwich, it is not available for anyone else to eat. In contrast, public goods, once produced, can be consumed by many people. Yet reflecting on the examples in the previous paragraph, it is apparent, as Buchanan says in the quotation that opens this chapter, that there are few goods that can be classified as *pure* public goods. There are two reasons for this. First, most goods that are used collectively can eventually become congested or overused, lowering the benefit people get from consuming them. Congestion can become so heavy that it prevents additional users from having access to that good altogether. Second, people often must be in the proximity of the good to use it, which means that it is not really available to everyone.

Consider a road. When it is uncongested, additional drivers have access to the road and can use it along with those who are already on it. This scenario fits the traditional definition of a public good. But as more traffic enters the road, there will come a point at which additional users slow everyone down. When congestion sets in, the benefit to each individual user declines. Eventually, roads can become so congested that an additional driver cannot enter the road until an existing driver leaves it. A congested road is not a pure public good. The same is true for a congested park and a congested library.

Similarly, people not in proximity to the public good are unable to use it. A library or park that is available to residents of one community is of little use to people who live hundreds of miles away. Even national defense—the archetypal “pure” public good—can, in practice, provide more defense to one area of a nation, leaving other areas more susceptible to invasion.

To fill in the broad gap between purely private and purely public goods, Buchanan developed his theory of clubs. Goods owned by a club are consumed by many individuals but, realistically, become congested if too many people join the sharing group. This is one reason why most clubs limit their membership.

The theory of clubs

Consider a swimming pool. Is it a private good or a public good? Some people do own their own pools individually, but others, while they would like to swim, do not feel that having their own pool is worth the cost, or they might want to use a pool larger than the one that they are willing to own personally. Some swimmers who want to do laps might find a typical backyard pool too confining, while others might prefer to join a group at a club pool rather than swim alone in a private pool. For diverse reasons, people join swim clubs and use the club pools collectively.

Members of the club must collectively answer two questions. First, how big a pool should the club build? Second, how many members should the club have? These two issues are interdependent. The larger the pool, the larger will be the group that can comfortably share its use. And the larger the membership, the larger the pool must be to accommodate the members.

Buchanan analytically derived an answer for these two questions—an answer meant to identify both an optimal quantity or “size” of the club good and an optimal number of users to share it.

Up to some point, people will prefer a larger pool despite the fact that the costs of building and maintaining a pool rise with its size. But the costs of the pool are divided among all of its members, so more members will bring the cost per member down. For a given membership size, there will be an optimal size of the club good. Similarly, for a given size of the club good, there will be an optimal size of the club’s membership. Buchanan solves these two issues simultaneously to show that the club has an optimal membership size and an optimal quantity, or size, of the club good.

In this way, Buchanan’s theory of clubs provides a more realistic and complete depiction of the “publicness” of various goods. Viewed as an explanation of actual clubs, Buchanan’s theory sheds light on the reason they are organized as they are. His theory of clubs also sheds some light on the way that collective organizations, more generally, should be designed.

Clubs and governments

Buchanan develops his theory explicitly around clubs, but it’s clear that the theory applies also to governments and lays a foundation for a theory of federalism. Club goods have an optimal size and an optimal sharing group, and different goods have different optimal sizes and sharing groups. Thus, his theory provides a sound rationale for having a federal system of governance with governments at different levels.

A park or a library can be shared by people who live nearby, so the optimal sharing group typically will be smaller than the optimal sharing group for national defense—a good that exhibits significant economies of scale. Bigger armies with more powerful weapons have an advantage over smaller armies, so the optimal sharing group for national defense is larger than for parks and libraries.

Similarly, the optimal sharing group for higher education is larger than for elementary education, so elementary education is produced at the local level while higher education is often produced at the state or national level. Some nations, and some states and provinces, have governments that are more

centralized than others. If government is going to produce goods for collective consumption, Buchanan's theory of clubs offers guidance on the optimal degree of centralization, and at what level various collectively consumed goods are most efficiently produced. The first question to answer is: What is the optimally sized sharing group for that particular good?

Federalism

Buchanan refers to federalism as “an ideal political order” with several advantages. First, federalism pushes government production toward having more market-oriented characteristics. Consider a supermarket analogy. Shoppers can enter the supermarket and choose among many items to put into their market baskets for purchase. Each shopper can choose, individually, which items to buy and which not to buy. No two shoppers need make the same selections. In contrast, whatever market basket a government provides is provided to everyone within that government's jurisdiction. Of course, politicians run for office by offering different political platforms to voters—different market baskets—but all voters end up with the particular market basket that the winner of the election supplies.

Federalism offers citizens more choice, because citizens can choose among jurisdictions. Obviously this choice is not exactly like filling one's own individualized supermarket basket. But if a person has many jurisdictions to choose among, she can choose the particular jurisdiction, or basket, that comes closest to satisfying her desires. As Buchanan says, “The principle of federalism emerges directly from the market analogy” (Buchanan, 2001: 69).

Buchanan also saw federalism as a mechanism for constraining the actions of governments. Most obviously, under federalism people can move from one local or provincial jurisdiction to another. Eager to keep and to attract citizens, governments at the same level in a federal system thus each have stronger incentives to provide a mix and pricing of public goods that is attractive to large numbers of people.

In addition, federalism can encourage governments at *different* levels to police each other. This outcome is most evident in contemporary society when higher-level governments constrain the activities of governments below them. But Buchanan also sees a potential role for lower-level governments to

monitor and police governments at higher levels. To this end, he recommends the possibility of secession. If lower-level governments have the right to secede from the jurisdiction of a higher-level government, the higher-level government has stronger incentives to govern wisely and effectively than if secession were impossible. The United States was formed in this way when the colonies seceded from Great Britain. More recently, and similarly, Great Britain seceded from the European Union.

There is also a connection between federalism and individual liberty because federalism gives individuals a choice of government jurisdictions. The choice itself is beneficial, but the fact that the choice exists also helps prevent governments from abusing their power, because abused citizens can more easily leave. Buchanan gave much thought to optimal constitutional design, as will be discussed in Chapters 8 and 9, and federalism was one component of constitutional design he advocated. It provides citizens with both greater choices and offers a constraint on government power.

Externalities

An externality exists when the actions of some people impose costs or convey benefits to others not involved in those actions. One common example is smoke from a factory that pollutes the air that nearby individuals breathe. The typical remedy suggested by economists is to tax the externality-generating activity, or if that is not feasible, to impose a regulation that reduces the external cost—the cost that's imposed on third parties.

Buchanan's views on the existence of externalities conform to those of mainstream economists, but he departed from those scholars on the desirable remedies for externalities. He maintained that when externalities cause resources to be used inefficiently, individuals have an incentive to find ways to remedy these inefficiencies on their own. If some people impose external costs on others, both parties have an incentive to negotiate to remedy those inefficiencies on their own. After all, even if Jones has a clear legal right to perform an activity that results in harm to Smith, Jones will quit that activity if Smith pays him enough to do so. And if the harm to Smith from Jones's activity is greater than is the gain that Jones gets from that activity, Smith has an incentive to offer to pay Jones to quit—and Jones has an incentive to accept Smith's offer.

There is a parallel between Buchanan's views on externalities and his theory of clubs—the latter being, you'll recall, an explanation of how people voluntarily form clubs to produce collectively consumed goods. In both cases there is the prospect that resources can be allocated more efficiently, with all parties able to adjust their actions to create mutual gains. Because externalities are rarely global in nature, Buchanan's discussion of federalism reveals that it is possible for people to have the option of moving out of jurisdictions where external costs are high and into jurisdictions where these costs are lower.

Also important to keep in mind is that using taxes or regulation to mitigate externalities brings its own problems. Buchanan noted that the theoretical remedies recommended by economists would work only if industries are what economists call "perfectly competitive."

Under perfect competition, industry output of goods or services is said to be at the maximum level that economic conditions permit. That is, output isn't too low. But output *is* too low when an industry isn't perfectly competitive. And when output is too low, society is harmed. Buchanan showed that government action meant to reduce pollution from such industries, by causing those industries' outputs of goods or services to fall even further, might inflict even more harm on society. That is, it's possible that the benefit society gets from the reduced pollution is more than offset by the harm it suffers from the reduced output of goods or services.

This conclusion applies more generally. The complexities of real-world markets mean that in the absence of actual market prices for external effects, there is no good way to find *the* optimal allocation of resources. Costs are subjective, as the previous chapter explains, so without an accurate measure of external costs, any policy prescription will be based on guesswork. Externalities might result in inefficiencies, but there is no guarantee that matters would be improved by a government-directed remedy. As we noted earlier, this fact did not lead Buchanan to advocate against all government responses to pollution and other externalities, but it did prompt him to advise politicians and the public to temper their enthusiasm about governments' abilities to improve matters with interventions.

Of course, the problem with externalities, as the name suggests, is that resources are used in ways that some affected persons don't bargain for—as

happens, for example, when a factory emits pollutants into the air that is breathed by all the town's residents and, thus, harms these residents. If (say) the town council had a clear property right in the town's airspace, the factory could negotiate with the council and offer to pay to it a sum to compensate the town for whatever amount of pollution the factory emits. Such a bargain would benefit both the town and factory. But if there is no clear definition of property rights in the air, then the factory will be reluctant to negotiate with the town council. It will likely simply continue to pollute without the town being compensated to bear the cost of the pollution.

Clearly defined property rights thus promote bargaining to mutual advantage—that is, toward greater efficiency of resource use—while the absence of such rights stymies such bargaining. In *The Calculus of Consent*, Buchanan and Tullock say

If property rights are carefully defined, should not the pure *laissez-faire* organization bring about the elimination of all significant externalities? ... After human and property right are initially defined, will externalities that are serious enough to warrant removing really be present? Or will *voluntary co-operative* arrangements among individuals emerge to insure the elimination of all relevant external effects? (Buchanan and Tullock, 1962/1999: 44)

The question here is just what activities are best undertaken in the private sector, through voluntary negotiation among individuals who have incentives to strike mutually agreeable bargains, and what activities are best undertaken by government, which has the power to force people to comply with its mandates. Buchanan recognized the existence of externalities, but he argued that in many cases inefficiencies that mainstream economists assume can only be rectified through government intervention are, in reality, better addressed through voluntary arrangements.

Air pollution is a classic example of an externality. Imagine that you are enjoying a back-yard picnic when your neighbour begins burning leaves. The smoke drifts into your yard, spoiling your picnic. Is government intervention warranted? One private solution would be for you to invite your neighbour to join your picnic and burn those leaves another day. This example might

scale up to neighbourhood associations negotiating with nearby neighbours to reduce nuisances. Buchanan believed that the potential for private negotiation to address externalities was insufficiently recognized by economists.

Externalities in politics

A central reason for Buchanan's caution in recommending government intervention to remedy externalities was his recognition that democratic politics carries with it a built-in externality. If one thinks of an externality as a third-party effect—that is, some people impose costs unilaterally on others—one should then see that when collective decisions are made by majority rule, the majority imposes external costs on the minority. The majority gets what it wants, forcing the minority to accept what it, the minority, does not want. This reality further reinforced Buchanan's reluctance to recommend government remedies for externalities. Government action would replace one externality with another.

This point warrants emphasis: politics contains a built-in externality. Government policies apply to everyone, whether or not they agree, unlike market exchange which only takes place if and when all parties to the exchanges agree. The nature of government means that whatever it does, it unilaterally imposes costs on some people. As Buchanan explains,

The minimum-size effective or dominating coalition of individuals, as determined by the voting rule, will be able to secure net gains at the expense of other members of the political group.... In the simple majority-rule model, this involves, in the limit, fifty plus percent of the total membership in the dominating coalition and fifty minus percent, of the total membership in the losing or minority coalition.
(Buchanan, 1999: 64-65)

Buchanan's point is partly theoretical. This outcome could happen. But his point is also partly practical. If democratic political institutions *could* be used in this way, individuals then in fact *have* incentives to use them this way because they can. It is naïve to think that some people can possess the power to manipulate the political process for their own gain without understanding that some people actually *will* exercise this power in that way.

This reasoning points directly to Buchanan's overall approach to analyzing political action. Economists, even in the twenty-first century, tend to evaluate government action as if government officials apolitically implement optimal public policies. Economists derive the theoretical optimal allocation of resources and then *assume* that government will act to achieve this optimal allocation. Buchanan's fundamental contribution was to note that just as resources are not typically allocated in markets with perfect efficiency, neither are they typically allocated by government with perfect efficiency.

Economists tend to benchmark real-world problems of market allocation of resources against a theoretical ideal that, in reality, is never attainable. Buchanan argued that the same tools and assumptions that economists use to analyze the operation of markets should also be used to analyze political decision-making, so that real-world markets are compared to real-world government allocations, rather than comparing actual market outcomes to unattainable government-engineered ideals.

Government failure

"Market failure" is the term economists use to describe market outcomes that are not perfectly efficient according to some textbook standard. Buchanan used the term "government failure" to point out that government-engineered allocations of resources are not perfectly efficient either. Therefore, if the choice is between market allocation of resources and government allocation of resources, the imperfect real-world market should be compared only with the imperfect real-world government.

Government failure arises from two problems. First, in many cases the *information* necessary to allocate resources efficiently is not available to policy-makers. Second, even if the information necessary to implement optimal policies is available, policy-makers often do not have strong enough *incentives* to implement such policies.

Buchanan's discussion of externalities provides an example of a situation in which sufficient information is not available to implement the theoretically optimal policy. In theory, there is an optimal corrective tax that could be placed on an externality to produce an efficient outcome. In practice, though, the information necessary to discover this optimal tax is unavailable. Even if

policy-makers want to implement an optimal tax, they lack the information necessary to do so.

Buchanan, however, placed special emphasis on the fact that even if all the necessary information were available, policy-makers often have poor incentives to implement optimal policies. Elected officials and government employees act to further their own interests, just like everyone else. Elected officials often undertake actions designed to boost their popularity leading up to an election, and government bureaucrats often make decisions motivated by what would give them pay increases or would increase their agencies' budgets.

The protective state and the productive state

The study of public finance can be divided into expenditure theory and revenue theory. This chapter deals with public-expenditure theory, which analyzes the justifications for allocating resources through government rather than through markets. Traditional public-expenditure theory focuses on market failures—that is, on why the market does not allocate resources as efficiently as is theoretically possible—and develops theoretical models to explain how, in theory, resources could be allocated more efficiently.

Buchanan takes a different approach to public-expenditure theory. First, he divides government's functions into two conceptual categories: the protective state and the productive state. The first justification Buchanan offers for public expenditures is to *protect* its citizens. Beyond that, the *productive* state can provide collectively consumed goods in situations in which the market might perform inadequately. Chapter 7 provides more detail on Buchanan's approach, in which he envisions politics as exchange.

Two big areas in traditional public finance that cite market failure as a reason for government action are externalities and public goods, and in both of these areas, Buchanan offers a distinctive approach in which he analyzes how individuals can cooperate with each other to allocate resources more efficiently. His theory of clubs analyzes public goods by looking at the groups that consume them rather than by analyzing the goods themselves. This approach depicts public goods more realistically—as existing on a continuum between public and private goods rather than being at one extreme or the other. It also shows how individuals can *cooperate* to produce public goods. Buchanan also

analyzes externalities by examining the ways in which individuals can cooperate to allocate resources more efficiently rather than relying on government-imposed solutions.

In drawing a parallel between market failure and government failure, Buchanan's insight is that democratic political systems create their own inevitable externalities. Some people can use the system to impose costs on others. This reality is a sufficient reason to raise questions about any government action ostensibly meant to "correct" a market failure. Such action unavoidably carries the risk of government failure. Buchanan concluded that when evaluating public policy, any imperfections in market activity must be compared against the inevitable imperfections inherent in government action. Such a comparison does not inevitably lead to the conclusion that government action is never warranted, but it does avoid the bias in favour of government action created by the standard assumption that government officials are fully informed and always act apolitically and exclusively in the public interest.