

Expanding Individual Choice and Control

A farmer prepares the soil, plants seeds, and tends her crops. Her wheat will not be ripe for months. How does she know she will reap the fruits of her hard work? A businessman buys a factory, hires engineers, and purchases steel, rubber, and glass, with the intention of manufacturing cars. How does he know he will enjoy the benefits of his effort and investment? A pharmaceutical firm invests millions now to develop a new drug that may, much later, help to cure cancer. How does it know it will receive a return on its research expenditures?

Property rights provide the crucial link between people's effort and their reward. They are the instrument society uses to establish people's control over things. In practice, these go by many names, such as deeds, titles, permits, vouchers, allowances, or accounts. Patents and copyrights are also property rights, establishing control over inventions, books, songs, and other creative concepts. The essential idea is the same in each case: the owner of the property right controls how something valuable is used.

Property rights have a profound effect on the choices people make. In addition to giving them the incentive to maintain and invest in things, people will use resources more prudently if they own them. Property rights are essential for markets to function. The lack of a clear title might prevent a car purchase. A home buyer is unlikely to sign on the dotted line if she is not sure that the seller actually owns the house. Without property rights, would-be entrepreneurs cannot secure loans they might need to help their businesses grow.

The key points of this chapter are:

- Property rights are essential to the efficient operation of markets, which in turn allocate resources to their most highly valued use. Clearly defined rights are important in avoiding overuse of resources and in encouraging the improvement of resources.
- The thoughtful application of property rights has already brought about a number of policy improvements, such as reducing air pollution in a low-cost way, protecting fisheries from overexploitation, and facilitating greater school choice.
- Providing people with ownership and individual choice and control of assets could help address several current concerns, including Social Security reform and the encouragement of international development.

The Meaning of Property Rights

When used in economics, the term *resource* refers not just to natural resources, such as land or clean air, but to anything of value, such as skills. A *property right* refers broadly to the arrangements society uses to assign people control over resources. Property rights give a homeowner control over his house, a farmer control over her land, and an inventor control over his ideas.

That control is defined using a bundle of specific rights. The bundle is commonly thought to consist of three main elements: the right to exclusive use of the resource, the right to income derived from the resource, and the ability to transfer those rights. Property rights can include a range of those elements, from weak rights (which might only include the right to use the resource) to strong rights in all three elements. For example, someone living on a river might acquire the right to use the water flowing past her property, but not the right to divert it and sell it to others. A car owner, on the other hand, acquires the right to use the car, to sell the car, and to realize any gain from the sale.

Even an *exclusive* right to control and use a resource, however, does not mean an *unrestricted* right to use it. A car buyer gets the keys and the title, but does not acquire the right to drive it at any speed or park it anywhere he wishes; the car must be driven within the limits of the law. Property rights typically come with restrictions on the use of the resource in question.

The Economic Effects of Property Rights

Property rights have a host of economic effects. Three especially important effects are illustrated here. The first is the effect of property rights on the use of a resource at one point in time. The second is the effect of property rights on incentives to maintain and improve a resource over time. The third is the effect that property rights have as a prerequisite for exchange.

The classic illustration of the effect of property rights at one point in time involves numerous cows grazing on limited pastureland. If access to the pasture is open to any and all cattle ranchers, then the pasture is an *open access resource*, a resource no person or group of people has an exclusive right to use. Individual property rights to the pasture are not established, and all ranchers compete to use it. In this case, each rancher might be expected to allow his cows to graze without limit, because each rancher bears only a fraction of the cost of additional grazing. That added grazing, however, is costly to other ranchers because less grass is available for their cows. Any individual rancher does not directly bear the full cost imposed on other ranchers, and will not take this cost into account when deciding how much to let his cows graze. The common grazing pasture thus becomes overused.

This phenomenon, known as the “tragedy of the commons,” is likely to occur for scarce resources for which access is open. A motorist entering a crowded freeway does not take into account the effect her car has on the space available for other cars, so freeways become overused at peak times.

The commons problem would be solved if someone owned the pasture or had control over grazing. If the owner allowed only his cows to graze, then he would have an incentive to consider the effect of one cow’s overgrazing on his other cows. He would voluntarily restrict their grazing. The owner could also limit access to the pastureland and charge other ranchers for grazing their cows, according to the amount of grass their cows ate. Because it was costly to them, each rancher would then reduce the amount of time his cows grazed. In either case, ranchers conserve on the scarce resource of pastureland because someone owns the land. Assigning property rights to the owner of the pasture not only encourages conservation of the resource, but also resolves the conflict among ranchers over the use of scarce land.

A second key effect of property rights is that they provide incentives to invest in, maintain, and improve resources over time. To appreciate this effect, think of a farmer using land that is not owned, but who nonetheless improves it by weeding, reducing erosion, and controlling pests. She then plants wheat and cultivates it. Without property rights, she has no legal right to prevent someone else from harvesting her wheat crop when it ripens. If she knows in advance that this might happen, she is unlikely to improve the land in the first place, and is unlikely to work it in the future. Alternatively, if she has property rights to the land, she knows she will reap the benefit of her efforts, and will invest in the land. Property rights provide an incentive to invest in resources over time, and society will be better off as a result. Homeownership provides another example, as discussed in Box 5-1.

Box 5-1: The Benefits of Homeownership

Homeownership provides one illustration of how property rights promote investment that benefits society. Researchers have shown that homeownership has many benefits beyond the economic advantages of owning a home. For example, the children of parents who are homeowners are less likely than children of renters to drop out of high school, or to have children as teenagers. Both of those effects are largest for children of low-income households. Children living in homes that are owned by the resident attain math and reading achievement that is measurably higher. Additionally, homeowners are more likely to be involved in their communities. Homeowners are more likely to know the identity of the head of their local school board, to vote in local elections, and to work to solve local problems. In short, homeowners are

Box 5-1 — *continued*

more likely to invest in their communities. The national homeownership rate set a record of 69.0 percent in 2004, up 0.7 percentage point from 2003. The minority homeownership rate was also at a record high of 51.0 percent, up 1.5 percentage points from 2003.

The President's policies have focused on dismantling barriers to homeownership, especially among low-income and minority homeowners. On December 16, 2003, the President signed into law the American Dream Downpayment Act of 2003, which helps low-income families with their downpayment and closing costs. His housing agenda includes increasing the supply of affordable homes through the Single-Family Affordable Housing Tax Credit, increasing support for self-help homeownership programs like Habitat for Humanity, simplifying the home-buying process, and increasing home-buying education. These initiatives will further help to achieve the President's goal of increasing the number of minority homeowners by at least 5.5 million before the end of the decade.

A third effect of property rights stems from their transferability. Transferable property rights (along with the enforcement of contracts) underpin market exchange. Clearly defined property rights give people certainty about what they can trade and keep. A market exists when valuable items are exchanged, or when money is given in exchange for an item. Without clearly defined, transferable property rights, markets will operate either poorly or not at all.

Well-functioning markets are socially beneficial for several reasons. Markets ensure that transactions benefit both parties. People will voluntarily give up their right to a resource only when they receive something of greater benefit in return. Markets ensure that resources are allocated to those who value them the most.

Because markets generate prices, they also play a central role in coordinating the behavior of buyers and sellers. Prices provide information about the strength of demand for a good or service and the cost of producing it. They also create incentives to act on that information. If the price of a good rises, suppliers know to, and have an incentive to, shift scarce resources into

producing more of that good. Similarly, demanders know to cut back on consumption of the good, and have an incentive to do so. This process ensures that there is no enduring shortage or surplus of the good; the correct amount is produced and consumed. This socially beneficial situation is based on a well-functioning system of private property rights.

The historical record over the last several centuries indicates the importance of strong property rights. The countries that are rich today are those that had sufficiently strong property rights in place to encourage industrialization. Evidence suggests that societies that have protected property rights over time are more prosperous.

The different experiences of North and South Korea provide an example. Prior to the division of the Korean peninsula in 1948, the North and the South were similar to one another economically, geographically, ethnically, and culturally. Following the Korean War, the North abolished private property in land and capital, while the South maintained a system of private property.

South Korea enjoyed one of the fastest surges of economic growth in history, and is considered an Asian “miracle” economy. South Korean gross domestic product grew from \$85 billion in 1983 to \$605 billion in 2003, an increase of more than sevenfold in only two decades. By 2004, South Korea’s GDP per capita was estimated to be over 13 times greater than North Korea’s. Although a number of factors contributed to South Korea’s superior growth, its stronger protection of property rights is recognized as a key factor. As the next section illustrates, even countries with relatively strong property rights systems benefit by extending them into new domains.

The Success of Property Rights in Addressing Policy Issues

The property rights concept has been creatively expanded and applied to help solve vexing policy issues. The use of property rights in practice illustrates the economic effects discussed earlier. Although there are many examples of how property rights help solve policy problems, three are offered here: pollution permits to help reduce air pollution in an efficient manner, individual transferable quotas that help conserve fisheries, and school voucher programs to help improve school performance. Each case is an example of assigning property rights to people with the best information and incentives to use the resources in question.

Addressing Air Pollution Through Tradable Permits

Clean air is another example of an open access resource; overuse manifests itself as air pollution. In the absence of government regulation, firms do not pay for the air they pollute. This problem can be addressed by defining property rights.

Title IV of the 1990 Clean Air Act Amendments introduced a property rights regime for air quality by establishing a national *cap-and-trade* system for sulfur dioxide (SO₂) emissions. SO₂ is a pollutant produced when a fuel containing sulfur, such as coal or oil, is burned, as is done to create electricity, for example. These emissions are not only associated with a wide array of health concerns, but are also a key component of acid rain. Title IV's cap-and-trade program works by capping the total amount of allowable SO₂ emissions from power plants nationwide and requiring that an emitting facility own a permit for each unit of pollution emitted. The cap sets the total level of allowable emissions of SO₂ from the power sector. The government also creates a system of rigorous emissions measurement and enforcement.

Under the Title IV program, SO₂ permits can be bought and sold by emitting facilities and by third parties. Trading allows firms with a high cost of reducing pollution to purchase credits from firms whose emissions can be reduced at lower cost, giving the industry an incentive to consider cleanup cost differences both across and within firms. The air cleanup will be accomplished at a lower cost than if all plants were directly required to meet an emissions standard that leads to the same overall level of pollution reduction. Using permits or allowances, the government does not need to tell firms how to lower pollution—it simply decides how much pollution needs to be reduced in the aggregate, and leaves it to the firms to decide how best to achieve that goal.

This example illustrates an additional benefit of pollution permits: they not only create valuable incentives, but also give control over decisions to the party that has the *best information* on how to clean up at the lowest cost. Individual firms are likely to have much better information than regulators about the idiosyncrasies of each plant. Pollution permits decentralize decision making, give control to the party with the best information, and provide incentives to act on that information.

The SO₂ trading program has been successful both at reducing emissions and at achieving those reductions at a lower cost than direct plant-level emissions standards. Emissions were initially reduced almost 30 percent more than the required level, compliance has been over 99.9 percent, and the annual cost savings from this approach has been estimated at hundreds of millions of dollars per year. A similar program exists in the eastern United States to control nitrogen oxide emissions, which contribute to regional ozone and smog problems.

In 2002, the President proposed “Clear Skies” air quality legislation that would expand the use of this approach to achieve additional control of SO₂ and nitrogen oxides and to control mercury emissions. The mandatory program would establish caps on power plant emissions of sulfur dioxide, nitrogen oxides, and mercury in 2018 that are roughly 70 percent below 2000 levels.

Consistent with this legislative approach, in December 2003, the EPA proposed the Clean Air Interstate Rule for states in the eastern half of the United States whose sulfur dioxide and nitrogen oxide emissions contribute to fine particle and ozone pollution in downwind states. The proposal would require states to regulate power plant emissions and provides states with a model cap-and-trade system similar to the regional nitrogen oxide program described above. The rule would reduce emissions of sulfur dioxide from power plants in those states by approximately 70 percent, and nitrogen oxide to approximately 65 percent below 2002 levels. Additionally, under the Clean Air Mercury Rule, the EPA proposed the first-ever regulatory action to reduce mercury emissions from coal-fired power plants, and proposed a cap-and-trade approach as a way of achieving these reductions. The program would cut mercury emissions by nearly 70 percent when fully implemented. Both the Clean Air Interstate Rule and the Clean Air Mercury Rule are based on an approach of establishing tradable emissions allowances in order to reduce pollution in an effective and cost-efficient manner.

Addressing Overfishing Through Property Rights

Another industry that benefits from the creation of well-defined property rights is commercial fishing. In the absence of regulation, fisheries are an open access resource. Because fishermen do not own the stock of fish in the sea, the fish they leave in the water may be caught by others, and there is no guarantee that they will be there to catch in the future. Even though many fishermen desire healthy fish populations for future use, individual conservation efforts are less effective due to this tragedy of the commons. Consequently, some fish stocks have declined worldwide, and fishermen must expend more effort and resources to catch the remaining fish. Today, an estimated 70 percent of the world’s fish species are either fully exploited or depleted. In the North Atlantic region, populations of cod, hake, haddock, and flounder have fallen by as much as 95 percent.

Overfishing leads to an array of economic problems. Because fish are less able to reach maturity and reproduce, fish that are caught tend to be of lower value. Fish become harder to catch as their stocks are depleted, and intense competition for the remaining fish creates additional waste. In 1993, the United Nations estimated that \$124 billion was spent attempting to harvest \$70 billion worth of fish. When a fishery collapses, many fishermen lose their jobs and their communities suffer. The collapse of the Atlantic cod stocks in

the mid-1990s left more than 40,000 people unemployed in the Canadian Maritime Provinces.

Governments have traditionally regulated fisheries with *command-and-control* approaches, which mandate many aspects of fishing by law. The requirements govern various aspects of the fishing industry, such as the technology used, the length of fishing seasons, and fishing locations. These approaches are not only difficult to enforce but they do not provide incentives for fishermen to curb their fishing efforts. Command-and-control approaches also require constant government intervention in order to set new specifications for technological innovations, while fishermen are prevented from shifting to lower-cost fishing methods by taking advantage of these innovations.

A property rights approach to fisheries management can effectively prevent overfishing while increasing the profits of fishermen. One such system is to issue *individual transferable quotas* (ITQs) to fishermen, which grant them exclusive rights to harvest fixed percentages of the total allowable catch. (While ITQs may be considered to create property rights, they are not “property interests” for purposes of the takings clause of the Fifth Amendment of the Constitution.) Like pollution permits, ITQs are transferable, ensuring that the fish will be caught by the most efficient and least wasteful boats, while all owners of a fishery can reap the benefits of a healthy and profitable fish stock.

Unlike command-and-control approaches, ITQ programs end the incentive for fishermen to “race to fish.” This observation is well demonstrated by Alaska’s sablefish and halibut fisheries where, prior to the introduction of property rights, the fishing season was progressively shortened to prevent the annual catch from exceeding its cap. Fishermen responded to the shortened season by increasing the number of vessels in their fleets and using more gear in an all-out effort to catch as much as possible before the overall cap was reached. These “frantic derbies” led fishermen to take undue risks by heading out in dangerous weather, and led to a glut of fresh fish on the market during the few short weeks of harvest and scarcity the rest of the year. Alaska’s halibut and sablefish ITQ programs, implemented in 1995, ended the race for fish and increased season length from less than 5 days per year to 245 days per year. Commercial fishermen have since enjoyed increased profits, decreased costs of gear and fishing crews, and a safer and more stable industry. The availability of high-quality halibut year-round has benefited consumers, and environmental benefits have been realized in connection with decreased halibut mortality.

ITQs have also been adopted in New Zealand, Iceland, Australia, Canada, and Papua New Guinea, among other countries. They have improved fish stocks while also increasing the profitability of many fisheries. New Zealand’s extensive system of ITQs was introduced in 1986 and, as of 1996, it accounted for more than 85 percent of that country’s total commercial catch. New Zealand fish stocks are now healthy, and increases in quota prices

provide evidence of increased profitability. There is evidence that New Zealand's ITQs have also encouraged investment in scientific research. Testimony to the ability of ITQs to mitigate overfishing and change the fishers' approach came when a New Zealand Ministry of Agriculture official commented, "It's the first group of fishers I've ever encountered who turned down the chance to take more fish."

One challenge in designing an ITQ program is determining the initial allocation of shares. To make the system politically viable, some areas have provided shares to the current users of the fishery in proportion to their recent catch levels. An alternative is to auction off the initial shares, which would raise money for the public and ensure that, from the start, the shares go to fishermen who value them the most.

Despite practical issues in designing ITQ programs, they hold tremendous promise for managing our Nation's fisheries in a manner that allows for increased efficiency in fishing, fewer economic and safety risks for fishermen, and fresher and higher quality seafood for consumers. The President supports the further adoption of ITQ systems to manage our Nation's fisheries, and the Administration has called for new national guidelines to facilitate the implementation of these programs while maintaining regional flexibility and ensuring fair and equitable quota allocations.

School Voucher Programs

The creation of property rights can be used to encourage better use of resources even when there is no "tragedy of the commons" problem. School voucher programs illustrate such benefits. Under many voucher systems, eligible families receive money from their state or school district to pay for their children's education at a participating private school. Typically, low-income families are eligible to receive vouchers.

When vouchers are not available, choosing a different school may come at the high cost of paying the full tuition for a private school or physically moving to a new district, if the district does not already offer a public school choice program. By lowering the cost of private sources of education, vouchers produce two main benefits. Most directly, families eligible for the vouchers are better off because they have greater ability to select the school they prefer most. Second, a well-designed voucher program can make all students in a school district better off. If the availability of vouchers increases competition, then the school has an incentive to provide a better education so that fewer students leave. To the extent that schools then provide a higher quality education in a more cost-effective manner, all the students who remain in the school are better off, even those who are not eligible for a voucher.

The degree to which a voucher system benefits all the students in a school system depends on the share of students who are eligible for a voucher, the

size of the voucher, and the extent to which schools' resources depend on the number of students who use a voucher. The number of eligible students and the amount of the voucher determine how many students will consider switching schools. When more students are eligible and when schools are competing for them, the gains from competition will be realized more quickly. Few students actually need to switch schools to motivate schools to improve. Instead, schools are motivated by the potential for competition, which depends on the number of students who are seriously *considering* switching, rather than the number who actually switch. The incentives involved and the potential for competition also depend on how much money is attached to the voucher.

Evidence indicates that voucher systems do indeed benefit both the students who use them and those who do not. A study of the voucher program in Milwaukee found that, after several years, the performance of students who used vouchers had risen 11 percentile points in math and 6 percentile points in reading relative to where they would have been if they had remained in their local public schools. A gain of 6 percentile points means that the students performed better than an additional 6 percent of the overall population of test takers.

The students who remain in the public schools also benefit significantly. As an example, consider the case of the Milwaukee voucher program. The program has been in place since 1990 and was expanded in 1998 to allow up to 15 percent of students to use a voucher. For the 2002–2003 school year, students from low-income families received a voucher for up to \$5,783 (over 50 percent of city per-pupil spending). Since the voucher amount is sufficient to cover the cost of private elementary schools, but not most secondary schools, more than 90 percent of all voucher users since the 1998–1999 school year have been in grades one through seven. Consequently, studies of the Milwaukee program have focused on elementary school students. After the introduction of vouchers, test scores of fourth graders at schools where the largest proportion of students were eligible for vouchers improved by 8.1, 13.8, and 8.0 percentile points in math, science, and English, respectively, over the students at comparison schools that were largely unaffected by vouchers.

This improved performance was not simply due to increases in school spending. The key measure of a school's efficiency—student achievement divided by per-pupil spending—increased significantly in the schools where the highest fraction of students were eligible for vouchers. In these schools, student performance rose by between 0.9 and 1.7 percentile points per thousand dollars in per-pupil spending. By making public schools more efficient, vouchers can help to close the efficiency gap between public and private schools. The private schools that accept voucher recipients usually have the same achievement levels as the public schools they draw students from, but spend significantly less per student on average. Based on their lower costs, voucher-accepting private

schools are four times as efficient as the local public schools from which they receive students. Drawing from five studies of voucher programs, one researcher notes that, while public schools spent an average of \$9,662 per student, voucher-accepting private schools spent only \$2,427.

While students on average are better off under a well-designed voucher program, one might still be concerned that many students are worse off. A common worry with vouchers is that the most-motivated students will use them, leaving the remaining students with a lower-quality peer group. One researcher of the Milwaukee system concludes that, even if a student's peer group dropped from the 90th percentile of the district to the 10th percentile, the student remaining in the school would still be at least as well off under the voucher program because the effect of the increased school performance would overwhelm this adverse change in the peer group. The decline in a student's peer group is merely hypothetical, since studies of the Milwaukee system have found little evidence that the best students leave. In fact, instead of being the best students at a school, future voucher users performed moderately below average in math and reading before they switched schools.

Vouchers are only one form of school choice. Additional forms include charter schools and plans that allow students to attend other public schools. When these programs are well designed, they too can produce efficiency gains by causing schools to compete with one another for students.

Vouchers are consistent with expanding property rights because they provide families with additional control over resources—financial resources in this case. The available evidence indicates that this change in property rights has produced positive outcomes for school systems that use well-designed voucher programs.

The Application of Property Rights to Current Policy Issues

Areas of current concern in which property rights could be usefully applied or extended include personal retirement accounts, health savings accounts, and Millennium Challenge Accounts.

Personal Retirement Accounts

Social Security is currently funded on a pay-as-you-go basis in which the present generation of workers funds current retirees' benefits. Social Security's financial viability is thus linked to the Nation's demographics. Increased life expectancies and lower birthrates have gradually reduced the worker-to-beneficiary ratio from 16-to-1 in 1950 to 3.3-to-1 today, with projections of 2-to-1 by 2040. Projecting future tax revenues and payouts, Social Security will begin running

deficits instead of surpluses by 2018, and Social Security assets and reserves will be depleted by 2042.

Social Security is no longer a bargain for younger workers. A single male worker with average earnings who was born in 2000 will receive a real return of only 0.86 percent annually after Social Security pays what it is able to pay him. For workers earning the maximum amount taxed (\$90,000 in 2005), the real annual return is *minus* 0.72 percent on the benefits Social Security can actually pay.

The Social Security system can be less advantageous for divorced individuals who do not share in the benefits of a previous spouse. To qualify for spousal benefits under the current system, a marriage must last ten years. Fully one-third of all marriages end prior to the ten-year eligibility requirement.

The President believes that personal retirement accounts must be part of a comprehensive solution to strengthen Social Security. He has proposed that younger workers be given the option to set aside part of their payroll taxes in a personal retirement account. A personal retirement account provides ownership and control, and offers younger workers the opportunity to build a “nest egg” for retirement that the government cannot take away. At retirement, the money in an account would be available to the retiree to supplement traditional benefits under a reformed Social Security system. Procedures would be established to govern how account balances would be withdrawn at retirement. This would involve some combination of annuities to ensure a stream of monthly income, phased withdrawals indexed to life expectancy, and the ability to withdraw as a lump sum any funds above a poverty-protection threshold. At death, any balance in the account could be passed on to loved ones, including widows, children, and grandchildren. The ability to inherit personal accounts would enhance the financial security of many surviving spouses and children.

Personal retirement accounts give younger workers the opportunity to receive a higher rate of return than they receive under the current system. Workers would have the flexibility to choose from several different low-cost, broad-based investment funds and would be able to adjust investment allocations periodically. Account options and management would be similar to that of the Federal employee retirement program, known as the Thrift Savings Plan (TSP). Money in personal retirement accounts would be invested in a mix of broadly diversified bond and stock funds. Workers could also choose a “life cycle portfolio” that would automatically adjust the level of risk as the individual aged by gradually shifting the allocation of investment funds to weight the portfolio more heavily toward bonds. To guard against sudden market swings on the eve of an individual’s retirement, investment in a life cycle portfolio would be automatic when a worker reaches age 47, unless the worker and his or her spouse specifically opt out. Personal retirement accounts would have

low administrative costs, estimated by the Social Security Administration actuaries as roughly 30 basis points, or 0.3 percentage point. These costs are much lower than the average costs associated with investments in stock or bond mutual funds. Most of these fees would be for record keeping rather than investment management.

By giving citizens greater control over their retirement assets, property rights can make an important contribution to improving the U.S. retirement system.

Health Savings Accounts

Many employees currently have access to flexible spending accounts through their employers. Using these accounts, employees can use before-tax dollars to pay for doctor co-payments, medications, dependent care costs, or insurance deductibles that they otherwise would pay for with after-tax dollars. With flexible spending accounts, the employee must select a certain amount of money to put into the account before the start of the year, during the enrollment period. The employer, usually through a regular payroll deduction, then deposits that amount into the account.

Flexible spending accounts are good for workers. Like employer contributions to health insurance coverage, flexible spending account contributions are excluded from taxable income, allowing workers to use pre-tax dollars to pay for uncovered medical costs. They also give employees added choice in obtaining and paying for health-related services that are not typically covered by insurance. They have a disadvantage, however: if workers overestimate their health care needs, and funds are not used before the end of the plan year, the remaining money is lost. Most companies operate on a calendar year, so the money typically must be used by December 31. This can create a year-end rush to spend any remaining funds, even if the purchases are of marginal value. Those who underestimate their spending will face a shortage of pre-tax funds if there is no money in the account.

The use-it-or-lose-it feature weakens employee property rights in flexible spending accounts. In December 2003, the President signed health savings accounts (HSAs) into law. HSAs are actual savings accounts, owned by employees. Money in the account can accumulate tax-free and can be invested, similar to an individual retirement account. Unlike flexible spending accounts, HSAs do not expire at the end of the year. Because the account belongs to workers, HSAs do not tie the tax-advantaged treatment of health care spending to a specific employer. They are portable. Workers own the accounts and can take them from job to job or into retirement. HSAs also can be passed on to heirs. These features, which extend from enhanced property rights, are important advantages of HSAs.

Participants in HSAs must be covered by a high-deductible health insurance plan (a minimum annual deductible of \$1,000 for individuals and \$2,000 for families). Contributions can be made each year up to the amount of the policy's annual deductible. The maximum contribution is the lesser of the deductible amount under the high-deductible health insurance plan or (for 2005) \$2,650 for individuals or \$5,250 for family coverage. These dollar limits will be adjusted for inflation each year. Individuals over age 55 can make extra contributions with the same tax advantages. Participants can withdraw funds as needed for deductibles and co-payments, as well as for over-the-counter drugs, long-term care insurance, and health insurance premiums when unemployed. Amounts withdrawn for any other purpose are subject to taxation plus a 10 percent penalty. Once employees reach age 65, they can take money out without penalty for any reason.

HSAs have major potential benefits. They can reduce health care spending because, for amounts up to the deductible, people will choose to consume the level of care that best suits their needs, rather than consuming the amount of care provided by their health coverage. HSAs also are likely to increase the number of insured because, using HSAs, premiums are paid with pre-tax dollars. This effectively makes high-deductible health care plans less expensive for the individual purchasing them.

The benefits of HSAs can be extended in a number of ways. More than half of the uninsured are small-business employees and their families. The President has proposed giving small-business owners a refundable tax credit for contributions made to their employees' HSAs. He also has proposed extending the benefits of HSAs to low-income Americans by providing a \$1,000 direct government contribution to their HSAs, combined with a refundable tax credit up to \$2,000 to help purchase a high-deductible health plan.

Millennium Challenge Accounts

Strengthening property rights systems creates a variety of benefits in the context of international development, some of which are described in Box 5-2, which discusses land titles in developing countries. To encourage economic growth and poverty reduction in the developing world, the President established the Millennium Challenge Account (MCA). The MCA represents a significant change in the provision of economic development assistance to developing nations. The MCA is based on the insight that development assistance is most effective when funds flow to countries that have policies and institutions that promote growth. Only those countries that have taken concrete steps to improve their own economies and governance structures, and thus ensure that aid will be effective, are eligible for MCA assistance.

To receive grant assistance, a country must abide by three key principles: economic freedom, just governing, and investment in people. Those principles

Box 5-2: The Benefits of Land Titles

Well-defined land titles exist in the United States and other industrialized countries, but they are lacking in many other countries. In Haiti, for example, 68 percent of urban residents and 97 percent of rural residents live in housing to which no one has clear title. By one calculation, the total value of real estate occupied, but not owned, in the developing world and former communist countries is at least \$9.3 trillion. Many countries are trying to close this gap. The Peruvian government, for instance, awarded over 1.2 million land titles to families in the 1990s.

When titles are clear and secure they can be transferred, investment can be rewarded, and houses can be rented or used as collateral. Both rural and urban property is worth more when ownership is well defined. After rural land was titled in Brazil, Indonesia, the Philippines, and Thailand, its value rose between 43 and 81 percent. When urban land was titled in the Philippines, its value rose by 14 percent in Manila and by 58 percent in Davao. In both Guayaquil, Ecuador, and Lima, Peru, urban land values rose by about 25 percent.

Secure land titles have profound effects on families. Adults can work at jobs outside the home because they no longer need to spend time physically guarding their informal claims. In Vietnam, families with secure titles worked away from their farms nine weeks more, on average, than those without secure titles. In Peru, adults in households with land titles worked outside the home 20 hours more per week than those without titles.

Because adults were working more, Peruvian children did not need to work as much. Land titling in Peru resulted in about a 28 percent reduction in the probability of child labor. Argentine children living in titled parcels enjoyed better weight-to-height scores (a measure of health status), lower teenage-pregnancy rates, and less repetition of school grades than children living in untitled parcels.

Families invest more in their homes and land when they have secure titles. A titling program in Argentina caused new property owners to improve the quality of their residences by 25 percent. Argentine families holding clear titles had significantly better roofs, walls, and garden areas than those without clear titles. In Lima, Peru, almost half of families holding titles invested in improvements to their land, compared with 13 percent of those without titles.

Business people also invest more when they have titles. In Romania, Russia, Poland, Slovakia, and Ukraine, entrepreneurs who believe their property rights are secure reinvest between 14 and 40 percent more of their profits back in their businesses. Farmers in Thailand holding titles invested so much more in their land that their output was 14 to 25 percent higher than those without titled land.

Box 5-2 — *continued*

Secure land titles also facilitate borrowing because the land can then be used as collateral for a loan. Farmers in Thailand borrowed between 50 percent and five times more if they had title to their land. Farmers in Costa Rica, Ecuador, Honduras, and Jamaica received larger loans on better terms if they held secure land titles. Residents of Lima, Peru used secure land titles to obtain loans to purchase microbuses, construct small factories, and invest in other small businesses.

Finally, secure land titles facilitate the renting and leasing of property. Owners without a title may be reluctant to rent or lease their land for fear the tenant will assert an ownership claim. They may prefer to leave it vacant or rent it to family members only. The landless poor thus have better access to land when it is titled. When secure titles were created in the Dominican Republic, the number of plots leased out increased by 21 percent. Leasing also increased the access poor families had to land, as 17 percent more households gained access. The percentage of poor who are tenants increased by 40 percent, and the area rented to them grew by 67 percent.

are in turn measured by a set of 16 quantitative indicators, including a measure of a country's civil and political liberties, rule of law, regulatory burden on businesses, control of corruption, and the number of days needed to complete any legal requirements to start a business. Such indicators are closely related to the strength of a country's property rights enforcement. Although the MCA has many goals, it encourages and rewards property rights enforcement through focus on both governing justly and economic freedom.

The MCA is also consistent with a property rights approach to development assistance because it allows countries greater ownership (that is, more control) over how they use the resources they receive. Countries receiving MCA assistance must be active partners in the development programs funded by the MCA. Each country that qualifies to receive aid constructs a detailed proposal of how the aid will be used, and then negotiates and signs a compact with the Millennium Challenge Corporation (MCC), which administers the MCA on behalf of the U.S. government. Not surprisingly, some countries are including property rights programs in compact proposals, citing how important property rights are to sustained economic growth. The compact must specify a limited number of clear, quantifiable goals, with concrete benchmarks, as well as the time needed to achieve those goals. Funding for all or part of a particular MCA compact may be scaled back or ended for failure to meet specific benchmarks. The MCA program does not impose a

development plan designed by others, but instead recognizes that recipient countries themselves are in the best position to evaluate their own needs.

The MCA has the added advantage of encouraging countries to adopt growth-promoting policies and institutions in order to qualify for this type of aid. The MCC announced the selection of 17 countries eligible for fiscal year 2004 and 2005 funding, including Armenia, Benin, Bolivia, Cape Verde, Georgia, Ghana, Honduras, Lesotho, Madagascar, Mali, Mongolia, Morocco, Mozambique, Nicaragua, Senegal, Sri Lanka, and Yemen. Although the first compacts for development assistance are still in process, the competitive process for selection has already prompted efforts by several countries to improve their institutions. For example, one country has publicly stated that it passed anti-corruption legislation to help it qualify for MCA funding.

Conclusion

In a society governed by the rule of law, ownership of resources is determined by the assignment of property rights. The term property rights refers to a bundle of rights that include the right to use a resource, to capture the income from the resource, and to transfer those rights. The assignment of property rights determines who has control over resources. That is, property rights determine who has the power to do what with which resources.

Using property rights to address policy problems is consistent with the principles of a free society because it assigns decision-making authority to individual decision-makers, rather than to central authorities. By giving firms, individuals, and families the authority to make decisions about the use of their own resources, property rights give control to those entities that have both the best information and the strongest incentives to use those resources efficiently.

Property rights solve the “tragedy of the commons” problem by encouraging owners to reduce the intensity of resource use. If an open access resource, such as fisheries or the air, is overused, assigning property rights to that resource will encourage its conservation. Ownership of a resource also encourages owners to invest in and improve the resource.

Property rights have important economic effects because they underpin market operation. Markets are socially beneficial because they allocate resources to their highest valued use and because they provide valuable price signals to both buyers and sellers. Without well-defined and enforced property rights, markets will work poorly or will not work at all.

Property rights analysis can illuminate similarities in policy solutions that may at first seem very different. There are numerous examples of the success of property rights in addressing policy problems, including air pollution,

overfishing, and poorly performing public schools. Property rights have facilitated cleanup of the air at low cost, have allowed fish stocks to recover, and have improved the performance of schools in those areas where they have been used effectively. Property rights can be used to help address other policy issues.