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Options for Federal Privatization and Reform Lessons from Abroad

By Chris Edwards

EXECUTIVE SUMMARY

he American economy is sluggish, the government is running large deficits, and the public is frustrated with the poor performance of federal bureaucracies. One reform that can tackle all of these problems is privatizing federal businesses and assets. This study discusses a dozen advantages of privatization and describes government activities that should be moved to the private sector.

A privatization revolution has swept the world since the 1980s. Following the United Kingdom's lead, governments in more than 100 countries have transferred thousands of state-owned businesses to the private sector. Railroads, airports, energy companies, postal services, and other businesses valued at more than \$3 trillion have been privatized. Governments of both the political right and left have unloaded state-owned businesses.

Despite the global success of privatization, reforms

have largely bypassed our own federal government. Indeed, many activities that have been transferred to the private sector abroad remain in government hands in this country. That creates an opportunity for U.S. policymakers to learn from foreign privatization and enact proven reforms here.

This study describes why the federal government should privatize the U.S. Postal Service, Amtrak, the Tennessee Valley Authority, the air traffic control system, lands, buildings, and other businesses and assets. Such reforms would increase efficiency, spur innovation, create greater transparency, and improve the environment.

Privatization would allow entrepreneurs to take on challenges at which federal bureaucracies are failing. The United States is a land of huge talent and diversity. But to take full advantage of those assets, we should divest the government of activities that individuals and businesses can perform better by themselves.

A privatization revolution has swept the world since the 1980s.

INTRODUCTION

A privatization revolution has swept the world since the 1980s. Governments in more than 100 countries have moved thousands of state-owned businesses and other assets to the private sector. Airports, airlines, railroads, energy companies, postal services, and other businesses valued at about \$3.3 trillion have been privatized over the past three decades.¹

Privatization has improved government finances by raising revenues and reducing spending. More important, it has spurred economic growth and improved services because privatized businesses have cut costs, increased quality, and pursued innovation.

In a 1969 essay, management expert Peter Drucker said that politicians in the 20th century had been "hypnotized by government . . . in love with it and saw no limits to its abilities." But he said that the love affair was coming to an end as the mismanagement of state-owned businesses was becoming more apparent everywhere. In his essay, Drucker called for a "reprivatization" of government activities, but he was a bit ahead of his time.

The privatization revolution was launched by Margaret Thatcher's government in the United Kingdom, which came to power in 1979. Prime Minister Thatcher popularized the word privatization, and her successful reforms were copied around the globe.³ She was determined to revive the stagnant British economy, and her government privatized dozens of major businesses, including British Airways, British Telecom, British Steel, and British Gas. Other nations followed the British lead because of a "disillusionment with the generally poor performance of state-owned enterprises and the desire to improve efficiency of bloated and often failing companies," noted a report on privatization by the Organisation for Economic Cooperation and Development (OECD).4

Privatization swept through other developed countries in the 1980s and 1990s, with major reforms in Australia, Canada, France, Italy, New Zealand, Portugal, Spain, Sweden, and other nations. A Labour government elected in New Zealand in 1984 privatized dozens

of state-owned companies, including airports, banks, energy companies, forests, and the national airline and telecommunications companies. Australia privatized dozens of companies between the mid-1990s and mid-2000s, generating proceeds of more than \$100 billion.⁵

During the 1980s and 1990s, Canada privatized more than 50 major businesses, including electric utilities, a railway, an airline, and the air traffic control system. France sold 22 major companies in 1986 and 1987 under the conservative Chirac government. In the 1990s and 2000s, both conservative and socialist governments continued to privatize. The number of companies in which the French government holds a majority stake plunged from 3,000 in the early 1990s to about 1,500 mainly smaller companies today.

Privatization swept through many developing nations. In Latin America, Chile, Mexico, and Panama had particularly large and successful privatization programs. Mexico, for example, slashed the number of state-owned firms from 1,155 in the early 1980s to just 210 by the early 2000s. In Eastern Europe, huge privatizations were pursued after the fall of communism, and the government share of total economic output in that region fell from about three-quarters in 1990 to about one-quarter today.

Privatization has gained support from both the political right and left. Left-of-center governments in Australia, the United Kingdom, France, Canada, and New Zealand all pursued privatization. ¹⁰ Privatization has attracted opposition from the public in many countries, but very rarely have reforms been reversed once put in place. Privatization works, and so the reforms have lasted.

Privatization has "massively increased the size and efficiency of the world's capital markets," one finance expert found. As of 2005, the 10 largest share offerings in world history were privatizations. By 2010, about half of the global stock market capitalization outside of the United States was from companies that had been privatized in recent years. Privatization has had a huge effect on the global economy.

Today, many countries have privatized the "lowest hanging fruit." But there is much left

to sell, and global privatization is continuing at a robust pace. Over the past four years, governments worldwide have sold an average \$203 billion of state-owned businesses annually. China is now the largest privatizer, but Western nations continue to pursue reforms. The British government, for example, sold a majority stake in Royal Mail in 2013 and then unloaded the final block of shares in 2015. 15

Privatization has been a very successful reform. An OECD report reviewed the research and found "overwhelming support for the notion that privatization brings about a significant increase in the profitability, real output and efficiency of privatised companies." And a review of academic studies in the *Journal of Economic Literature* concluded that privatization "appears to improve performance measured in many different ways, in many different countries."

Despite the success of privatization, reforms have largely bypassed our own federal government. President Ronald Reagan's administration explored selling the U.S. Postal Service, Amtrak, the Tennessee Valley Authority, the air traffic control system, and federal land, but those efforts stalled. President Bill Clinton had more success. His administration oversaw the privatization of the Alaska Power Administration, the Elk Hills Naval Petroleum Reserve, the U.S. Enrichment Corporation, and Intelsat. 19

Little action on federal privatization has been pursued since then, but there are many federal activities that should be turned over to the private sector. The United States has a government postal system, but European countries are privatizing their systems and opening them to competition. The United States has a government air traffic control system, but Canada and the United Kingdom have privatized their systems. Our federal government owns electric utilities and a passenger rail service, but other countries have privatized those businesses.

The first section of this study examines the path-breaking British privatizations of recent decades. The second section discusses 12 advantages of privatization. The third section describes six businesses and assets that federal policymakers should privatize: the U.S. Postal

Service, Amtrak, the Tennessee Valley Authority, the air traffic control system, land, and buildings. That section also highlights other businesses and assets to sell.

This study mainly uses *privatization* in a narrow sense to mean fully moving ownership of businesses and assets to the private sector. The term is often used more broadly to include government contracting, public-private partnerships, vouchers, and other forms of partial privatization. Those are all worthy reforms, but they are not the focus here.

When the next president comes into office in 2017, the time will be ripe for privatization reforms. Privatization would help spur growth in our underperforming economy and modestly reduce rising budget deficits. Privatization would also create qualitative benefits, such as increasing transparency and improving environmental stewardship. After decades of privatization abroad, U.S. policymakers have a wealth of foreign experience to guide their reform efforts.

MARGARET THATCHER BLAZES THE TRAIL

Margaret Thatcher was elected Conservative Party leader in the United Kingdom in 1975, and her party gained a majority in parliament in 1979. Prime Minister Thatcher came into office promising to "denationalize" the government-dominated economy. However, Thatcher faced numerous crises her first few years in office that limited her privatization efforts, including a deep recession, high inflation, labor union strife, and the Falklands War.

At first, Thatcher and the Conservatives did not have a detailed agenda for privatization. They were cautious, but they learned as they went, and the early successes generated momentum for further reforms. One important early reform was the popular "Right to Buy" law, which allowed people to buy the government-owned "council" houses that they lived in. With that successful reform, the share of British households in council housing plunged from 31 percent in 1981 to just 7 percent today.²¹

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Thatcher had a strong personal belief in privatization.

With the economy recovering in the early 1980s and with Thatcher reelected with a large majority in 1983, the British privatization program kicked into high gear. Campaigning in 1983, the Conservatives promised wide-scale privatizations, and that created a strong mandate for them to move boldly after their land-slide election victory.

Thatcher had a strong personal belief in privatization. Privatization was crucial for "reversing the corrosive and corrupting effects of socialism," she said, and central to "reclaiming territory for freedom." The purpose of privatization was to ensure "the state's power is reduced and the power of the people enhanced." Thatcher was heavily influenced by economist F. A. Hayek and by her key adviser, Keith Joseph.

Thatcher blazed the trail, but there were some international precedents for her reforms. In the 1950s, the British Conservatives privatized some activities—including the steel industry—that had been nationalized by the previous Labour government. And in the 1950s and 1960s, West German political leaders Konrad Adenauer and Ludwig Erhard began "denationalizing" industries to improve efficiency and broaden public share ownership. The German government, for example, sold a majority stake in Volkswagen in a public share offering in 1961.

Another influence on Thatcher's government was a Canadian privatization effort. Some of Thatcher's key advisers, including Alan Walters, were familiar with the privatization of a huge resources company in British Columbia in 1979. ²⁴ That process included a distribution of free shares to all citizens in the largest share offering in Canadian history to that date. A 1980 book describing that reform was the first with the word *privatization* in its title. ²⁵

Numerous privatization methods have been used in the United Kingdom and other developed nations. ²⁶ The dominant method has been share issue privatizations. The government proceeds with an initial public offering (IPO) of all or a portion of company shares, usually followed with the later sale of remaining shares. British Aerospace was privatized in 1981 with an IPO of 52 percent of its shares,

with remaining shares unloaded in later years.

The British Telecom (BT) IPO in 1984 was a mass share offering, which "did more than anything else to lay the basis for a share-owning popular capitalism in Britain," said Thatcher.²⁷ The government ran high-profile television ads to encourage the purchase of BT shares, and more than two million citizens participated in the largest share offering in world history to that date.²⁸

Selling the 250,000-worker BT was a bold decision, and its success generated momentum for further reforms. The OECD called the BT privatization "the harbinger of the launch of large-scale privatisations" internationally. ²⁹ In the years following, the British government proceeded with huge public share offerings in British Gas, British Steel, electric utilities, and other companies. In the gas privatization, two million individuals who bought shares had never held corporate equities before. ³⁰

A second privatization method is a direct sale or trade sale, which involves the sale of a company to an existing private company through negotiations or competitive bidding. For example, the British government sold Rover automobiles and Royal Ordnance to British Aerospace. Other privatizations through direct sale included British Shipbuilders, Sealink Ferries, and The Tote.

A third privatization method is an employee or management buyout. The United Kingdom's National Freight Corporation was sold to company employees in 1982, and London's bus services were sold to company managers and employees in 1994. Management and employee buyouts were also popular in Eastern Europe after the fall of communism. The mass issuance to citizens of free or low-cost share vouchers was also a popular privatization method in Eastern Europe.

In most cases, British privatizations went hand-in-hand with reforms of regulatory structures. The government understood that privatization should be combined with open competition when possible.³¹ British Telecom, for example, was split from the U.K. post office and set up as an arm's-length government corporation before shares were sold to the public.

Then, over time, the government opened up BT to competition.

The British government opened up intercity bus services to competition beginning in 1980. That move was followed by the privatization of state-owned bus lines, such as National Express. British seaports were privatized during the 1980s, and the government also reformed labor union laws that had stifled performance in the industry.

Studies in the United Kingdom and elsewhere have found that opening industries to competition is important to maximizing productivity gains from privatization.³² When possible, privatization should be paired with the removal of entry barriers—open competition is preferable to either government or private monopolies. However, the British experience also shows that even when industries have natural monopoly elements, privatization combined with improved regulatory oversight spurs gains to efficiency and transparency.³³

Table I lists the major privatizations in the United Kingdom since 1979.³⁴ It shows company names at the time of privatization and the year that the first portion of each business was privatized. For less-familiar companies, the industry is noted in parentheses.

British privatization has been a big success. Entrepreneurs and competition have transformed the British economy. Bloated workforces at many formerly state-owned firms were slashed. Employment in the electricity and gas industries was cut in half between the mid-1980s (before privatization) and mid-1990s (after privatization).³⁵ Privatization has typically generated large improvements in labor productivity, particularly for firms in competitive industries, such as British Steel, British Coal, British Telecom, British Airways, and Associated British Ports.³⁶

Just knowing that privatization was coming spurred efficiency reforms in many companies, as Thatcher herself had predicted in a 1981 speech.³⁷ British Steel hugely chopped its workforce and improved its productivity leading up to its 1988 privatization, as did British Airways before its 1987 privatization. After privatiza-

tion, with revenues and profitability rising, British Airways increased its employment to serve expanding markets. That pattern of cost cutting, increased efficiency, and then growth is common among privatized firms.

British consumers benefited as privatization and competition reduced prices and improved service quality. A British Treasury study found that real prices after a decade of privatization had fallen 50 percent for telecommunications, 50 percent for industrial gas, and 25 percent for residential gas.³⁸ A decade after electricity privatization, real prices were down more than 25 percent.³⁹ The environment gained from the latter privatization as well, as the privatized electricity industry moved rapidly to adopt natural gas as a fuel and replace coal.⁴⁰

The Treasury study found that "most indicators of service quality have improved" in privatized businesses. Economist David Parker found, "There is no substantial evidence that lower manning and price reductions in the public utilities have been at the expense of service quality." The share of British Telecom service calls completed within eight days soared from 59 percent to 97 percent in the decade after privatization. Before privatization, it had taken months and sometimes a bribe to get a new telephone line. He yarious measures, safety also improved in the privatized industries, including gas, electricity, and water.

Millions of British savers gained from investing in the privatized companies. The government made share offerings appealing to small retail investors, which fit with Thatcher's belief in "popular capitalism." She wanted to create a "capital-owning democracy . . . a state in which people own houses, shares, and have a stake in society, and in which they have wealth to pass on to future generations." Under Thatcher, the share of British citizens owning equities soared from 7 percent to 25 percent. ⁴⁷ Many middle-income savers bought shares of companies such as British Gas, and they generally earned solid returns. ⁴⁸

The government itself gained from privatization because money-losing companies,

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Table	1			
Major	British	Privat	izatioı	าร

Year	Company or Asset
1979	British Petroleum, ^a government council housing
1981	British Aerospace, Cable & Wireless, British Sugar Corporation
1982	Britoil, National Freight Corporation, Amersham International (radioactive materials)
1983	Associated British Ports (seaports), British Shipbuilders, British Transport Hotels
1984	British Telecom, Jaguar, Enterprise Oil, Sealink Ferries
1986	British Gas, National Bus Company
1987	British Airways, British Airports Authority, Rolls Royce, Rover (trucks), Royal Ordnance (military products), Royal Dockyards
1988	British Steel, Rover (automobiles), National Express (intercity busing)
1989	The 10 regional water agencies, Short Brothers (aircraft)
1990	National grid and the 12 regional electricity distribution firms, Girobank
1991	National Power, PowerGen, Scottish Power, Scottish Hydro, Forth Ports (seaports)
1992	Trust seaports, motorway service stops, British Technology Group
1993	Northern Ireland electricity
1994	British Rail, British Coal, London bus services
1996	British Energy (nuclear generation), AEA Technology (nuclear research)
2001	National Air Traffic Services (NATS)
2003	Qinetiq (defense technology)
2006	British Nuclear Fuel
2009	UKAEA Limited (environmental management)
2011	The Tote (retail betting shops)
2013	Royal Mail
2015	Eurostar rail service ^b

Source: Author's research.

^a A portion of British Petroleum had been sold in 1977, as part of a deal with the International Monetary Fund to raise revenues. Then, beginning in 1979, the Thatcher government sold the rest of the shares in a series of offerings through the 1980s.

^b The United Kingdom sold its 40 percent stake in Eurostar, but the rest of the firm is held by the French state-owned rail firm. See Marc Champion, "U.K. and France Should Ditch Eurostar," *Bloomberg View*, March 5, 2015.

such as British Steel, were removed from the budget. Also, the government gained revenues from the share offerings and direct sales, and from the taxes paid by the newly privatized firms. The British government has raised more than 70 billion pounds (more than \$100 billion) from privatization.⁴⁹

A few British privatizations were particularly controversial. State-owned British Rail had long consumed taxpayer subsidies, and it faced a long-term decline in its transportation market share. In 1994 the government split up the company and privatized separate pieces: Railtrack took control of tracks and stations; 3 firms took control of rail freight; and 25 firms received franchises to operate passenger services. The British rail industry went from being vertically integrated to being split into separate pieces.

In the late 1990s, a few high-profile rail accidents raised concerns about the industry's new structure. Some accidents may have been due to insufficient track maintenance—in both the years before and the years after privatization. Those problems led to the renationalization of Railtrack in 2002 as Network Rail. Some experts believe that undoing the industry's vertical integration was a mistake. ⁵¹ Before nationalization in the 1940s, British passenger rail was vertically integrated as four regional private rail firms owning both track and rolling stock. ⁵²

Despite uncertainty about the optimal structure for the industry, British rail has flourished since passenger services were privatized in the 1990s.⁵³ Unlike elsewhere in Europe, rail ridership in the United Kingdom has soared. Total passenger trips bottomed out in 1995 and then began rising. By 2014, total passenger trips had more than doubled since privatization, from 740 million to 1.5 billion.⁵⁴ Rail ridership is now hitting levels not seen since the early 1920s.⁵⁵

Despite the rise in passengers, the on-time performance of British passenger rail improved after privatization.⁵⁶ Also, surveys find fairly high levels of customer satisfaction with rail travel.⁵⁷ And despite the few high-profile accidents in the 1990s, the overall safety record of British rail has steadily improved since privatization.⁵⁸

In a 2013 study, the European Commission found that the United Kingdom's railways were the "most improved" in all of Europe since the 1990s and were second only to Finland's in customer satisfaction.⁵⁹ In sum, British rail reform has been a success, not the failure that some critics have claimed.

The privatization of British water and sewer provision has also been criticized. The government privatized 10 regional water and sewer agencies in 1989 and created a new regulatory authority to oversee them. After the reforms, people complained that water prices rose. But those increases stemmed from the private firms' increased capital investment to modernize very old government infrastructure and from increased European regulation. Privatization gave the companies access to the capital they needed to upgrade.60 Put another way, water prices had been kept artificially low under government ownership, which led to underinvestment and inefficient overconsumption. After increases in the first six years following privatization, British water prices have risen just 9 percent in real terms over the past two decades.61

Furthermore, water industry efficiency and service quality have increased. Wasteful leaks in the British water system have fallen by one-third since privatization, supply interruptions are down, and the number of customers with low water pressure has plummeted. Drinking water quality has improved, and pollution has fallen. In sum, the overall quality of the British water system has substantially improved since privatization.

ADVANTAGES OF PRIVATIZATION

Since Margaret Thatcher got the ball rolling in 1979, more than 100 countries have raised about \$3.3 trillion by selling off thousands of state-owned businesses. The revolution spread from the United Kingdom to Continental Europe, Latin America, Australia, Canada, Israel, and many other places. In dollar value, the bulk of privatization has occurred in developed nations. In those countries, some of the largest reformers relative to the size of their

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economies have been Australia, New Zealand, Portugal, Spain, and the United Kingdom.

For governments, a main benefit of pursuing privatization is to raise revenue. But for citizens, the main benefit is the positive effect on economic growth from increased efficiency and greater innovation. Businesses that are more productive can pay workers better and cut prices for consumers. Also, by reducing waste they are better environmental stewards.

Many statistical studies have examined the performance of businesses before and after privatization. A 1994 study in the *Journal of Finance* looked at 61 privatizations in 18 countries and found "strong performance improvements, achieved surprisingly without sacrificing employment security. Specifically, after being privatized, firms increase real sales, become more profitable, increase their capital investment spending, improve their operating efficiency, and increase their work forces." 64

A 1999 study in the *Journal of Finance* compared the performance of 85 firms across 28 countries before and after privatization. It found that privatization increased "profitability, output, and operating efficiency." Firms increased sales per employee an average of 23 percent. The statistical results "strongly suggest that privatization yields significant performance improvements," concluded the authors. 66

A 2003 study on privatization in the *Journal of Public Economics* found that "the empirical literature has provided systematic evidence that privately-owned companies outperform state-owned enterprises."

A 2004 study by the Inter-American Development Bank of Mexico's reforms found that "privatization leads to dramatic improvements in firm performance and that they are the result of efficiency gains, not transfers from workers or exploitation of consumers." The study found other social benefits: "greater access to services, which usually follows privatization, leads to welfare gains for the poorest consumers that outweigh any increase in prices." Mexico privatized hundreds of companies during the 1980s and 1990s.

A 2012 study looked at more than 50 Canadian businesses privatized during the 1980s and

1990s, including an airline, a railroad, manufacturers, and energy and telecommunications firms. It found, "[T]he overall impacts have been largely positive, in many cases impressively so. Key economic indicators such as capital expenditures, dividends, tax revenues and sales per employee tended to increase." One sign of the success of reforms is that very few privatized firms in industrial countries have been renationalized, even when political parties changed. In Canada, none of the more than 50 major privatizations have been reversed. Privatization works, which is why even left-of-center governments generally accept reforms once the dust has settled.

A 2012 review by privatization expert John Nellis found that "the vast majority (but not all) of firm studies or surveys in most countries and sectors [have] continued to find positive post-privatization performance changes in terms of lowered costs, improved labor efficiency, increased outputs, higher returns to owners and shareholders, and, very often, increased investment."⁷² In another study, Nellis found that "contrary to popular conception," privatization "has not contributed to maldistribution of income or increased poverty."⁷³

A 2001 *Journal of Economic Literature* article by William Megginson and Jeffry Netter provides a detailed international review of academic studies. They found studies "almost unanimously report increases in performance. . . . Privatization appears to improve performance measured in many different ways, in many different countries." They concluded that privatized firms "almost always become more efficient, more profitable, increase their capital investment spending, and become financially healthier."

Megginson examined hundreds of studies for his 2005 book, *The Financial Economics of Privatization*. He concluded, "Private ownership must be considered superior to state ownership in all but the most narrowly defined fields or under very special circumstances." Furthermore, "the weight of empirical evidence on the state versus private ownership question . . . now strongly supports those who believe that private ownership is inherently more efficient than state ownership. This is true even for natural monopolies."

Most academic studies on privatization examine quantitative factors, such as efficiency and output. But privatization also creates qualitative improvements, such as greater transparency and improved customer service. The following sections describe a dozen advantages of privatization.

1. Promotes Efficiency and Innovation

Private businesses in competitive markets have strong incentives to increase efficiency—to produce more and better products at lower costs. Businesses seek profits, which are a measure of net value creation. If a business performs poorly, it will lose money and have to change course, or ultimately face bankruptcy or a takeover.

By contrast, government entities are usually not penalized for excess costs, misjudging public needs, or other failures. They can deliver bad results year after year and still receive funding. Government workers are rarely fired, and there is no imperative for managers to generate net value.

The superiority of private enterprise is not just a static efficiency advantage. Instead, businesses in competitive markets must pursue continuous improvements. They learn by doing and adjust to changes in society, a process called adaptive efficiency.⁷⁸ By contrast, governments get ossified by bureaucracy and are slow to adapt.

Businesses routinely abandon low-value activities, but "the moment government undertakes anything, it becomes entrenched and permanent," noted management expert Peter Drucker.⁷⁹ As an example, the demand for mail has plunged and the U.S. Postal Service (USPS) is losing billions of dollars a year, but Congress has blocked obvious reforms, such as ending Saturday delivery. Private businesses make such adjustments all the time as demand for their products fluctuates.

Government organizations undermine growth by keeping resources employed in low-value activities, even as tastes and technologies change. That is why Drucker said, "[T]he strongest argument for private enterprise is not the function of profit. The strongest argument is the function of loss." Losses encourage private businesses to drop less-valuable activities and move resources to more promising ones.

In the 20th century, many economists supported government ownership because they thought that expert planners could efficiently organize production. But they ignored the dynamic role of businesses in continuously improving products and production techniques. In a *Journal of Economic Perspectives* article, Andrei Shleifer said that many economists did not foresee the "grotesque failure" of government ownership, and they did not appreciate the private-sector role in generating innovation.⁸¹

2. Increases Labor Productivity

Lacking incentives to control costs, government organizations tend to employ excess workers. In a survey of its member countries on privatization, the OECD said, "state-owned enterprises (SOEs) tend to be overstaffed. Empirical studies of privatization generally identify the downsizing of a bloated payroll in SOEs among the main sources of efficiency gains." Similarly, a World Bank study on privatization noted:

Governments the world over have employed too many workers in their state enterprises. Many of these enterprises were in fact designed as vehicles for job creation and political patronage. Protection from competition, lack of hard budget constraints, and security of tenure of public sector positions have led to chronic overstaffing. ⁸³

The OECD suggested that SOEs are sometimes overstaffed by 30 percent to 50 percent. 84 With privatization, that sort of bloat can be cut. Surveying international experience, John Nellis found that layoffs of 25 percent are not uncommon after privatization. 85 Postal system reforms, for example, often produce job cuts of that magnitude. 86 In Canada, the parliamentary library said that state-owned Petro-Canada "was widely regarded as inefficient, oversized and debt-ridden," and the company's workforce was slashed 40 percent with privatization. 87

When employment falls after privatization, labor productivity (output per employee) gen-

Businesses in competitive markets must pursue continuous improvements.

Over the longer run, privatized companies grow, employment expands, and compensation rises.

erally rises. One study found that the typical labor productivity increase after privatization is about 20 percent. ⁸⁸ In Canada, the air traffic control system has cut its workforce 30 percent since privatization in the 1990s, but it is handling 50 percent more traffic today. ⁸⁹

In the United Kingdom, labor productivity doubled in the electricity and gas industries in the decade after privatization. For British railroads, passenger journeys per employee increased 37 percent in the 15 years after privatization. That improvement occurred as rail safety increased and customer satisfaction remained high.

Japan privatized much of its passenger rail system in the 1990s. The railroads reformed their rigid union rules and slashed their workforces. 92 Labor productivity increased more than 50 percent, on average, in the restructured companies. 93 The privatization of Argentina's national railroad in the 1990s produced remarkable results. Labor productivity shot up 370 percent as the bloated railroad workforce was chopped by four-fifths. 94 Despite the workforce reductions, Argentine freight service greatly improved and passenger ridership soared. 95

Higher productivity generally translates into higher worker earnings and greater output in the overall economy. One study found that privatized firms in Mexico reduced their employment, on average, by about half. But as workforces were cut, labor productivity doubled, and remaining workers at privatized Mexican firms enjoyed substantial wage gains. Surveying the international literature, William Megginson found, "most privatizations result in some employment shedding, but... the workers who remain at privatized companies are usually paid significantly more." "97"

Initial job cuts are often just a short-run phenomenon. As productivity improves after privatization, employment often rebounds as companies find new markets and expand sales. A review of privatizations in Canada found that often "employment initially fell, only to rise again over the long term." The study noted, "After many of these companies restructured, which took about five years following privatization, hiring began again."

In sum, privatization often dislocates workers at bloated companies in the short run. But over the longer run, privatized companies grow, employment expands, and compensation rises. The overall economy gains because higher productivity translates into rising incomes. Economic change can be difficult, but governments can ease the process with tax and regulatory reforms to spur creation of new businesses that will create new jobs.

3. Improves Capital Investment

In the private sector, businesses have incentives to maintain their facilities in good repair and to invest to meet rising demands. To fund expansions, they reinvest their profits and raise financing on debt and equity markets.

By contrast, government organizations often consume their funding on bureaucratic bloat and have little left over for repairs and upgrades. Government infrastructure is often old, congested, and poorly maintained. Capital investment falls short and tends to be misallocated. This was a common experience with British industries before they were privatized, and access to private funding to increase capital investment was an important factor in the Thatcher government's privatization drive. Too

The same problems of run-down public infrastructure are apparent in the United States today. The National Park Service has many poorly maintained facilities and billions of dollars of deferred maintenance. Urban subway and light rail systems across the nation have tens of billions of dollars of maintenance backlogs. Politicians enjoy launching new parks and rail systems, but they put little effort into maintaining what the government already owns.

Federal agencies cannot count on Congress for funding. Consider the air traffic control system, which is run by the Federal Aviation Administration (FAA). The system needs billions of dollars in investment to meet rising passenger demands, but the FAA has not secured stable long-term funding from Congress. Furthermore, the FAA mismanages its capital investment projects, which often experience delays and cost overruns.

Amtrak's investment budget is also mismanaged. Because of politics, the company invests in rural routes that have few passengers instead of higher-demand routes in the Northeast. In his book on Amtrak, rail expert Joseph Vranich argued, "Congressional requirements that Amtrak spend money on capital improvements to lightly used routes are outrageous. . . . Throughout Amtrak's history, it has devoted too much of its budget to where it is not needed, and not enough to where it is." ¹⁰¹

Privatization solves these sorts of problems. Privatized businesses use customer revenues and capital markets to finance upgrades. They do not have to lobby Congress to receive needed funding. And they have strong incentives to invest where the actual demand is, free from political pressures that plague government-owned businesses.

4. Expands Entrepreneurship and Competition

When the government produces goods and services, it tends to squelch competition, either directly by enforcing a monopoly, or indirectly by deterring entrants unwilling to compete with a subsidized government producer.

Devoid of competition, government organizations resist change and are slow to adopt better ways of doing things. The FAA runs the air traffic control system with outdated technology. The USPS is being undermined by email, but it does not have the flexibility to adapt. Airlines and intercity buses have improved their efficiencies and reduced costs under competitive pressures, but Amtrak's costs remain high. ¹⁰²

In the economy, major innovations often come from upstarts, not industry-dominant firms. Big advances in industries, from computers to retail, have come from new firms doing things in new ways. So economic progress depends on open entry, on the ability of entrepreneurs to challenge existing providers. That is hard to do when the existing provider is the government.

Privatization abroad has often been paired with the removal of entry barriers. The European Union has urged member countries to open their markets as they privatize their airline, energy, telecommunications, transportation, and postal companies. British postal markets were opened for competition, and then Royal Mail was privatized. The privatization of British Telecom was followed by deregulation and then the rise of competitors such as Vodaphone, which is now one of the largest telecommunications firms in the world.

U.S. policymakers should use privatization as a catalyst for pro-competition reforms. The government should privatize USPS, Amtrak, and other companies, and at the same time open industries to new entrants. Open entry attracts people with new ideas and encourages the dissemination of new production techniques. The best and the brightest do not want to work for moribund bureaucracies such as the USPS and Amtrak. As a result, those companies today are essentially closed to external know-how and global best practices.

The American economy is rapidly evolving, driven by globalization and new technologies. We can keep up with all the changes by making our economy as flexible and open to new ideas as possible, and privatization and competition are the best ways to do that. If America opened its postal industry to competition, there would likely be many entrepreneurs ready to revolutionize it.

5. Increases Transparency

Citizens have difficulty monitoring the activities of government agencies. The goals of agencies are often vague, and their finances are difficult to understand. Government officials are protected by civil service rules and can be secretive in their activities. Even members of Congress have difficulty squeezing information out of agency leaders, as we often see at congressional hearings.

By contrast, private companies have clear goals such as earning profits and expanding sales. Performance is monitored by auditors, shareholders, and creditors. And consumers monitor companies in the marketplace, giving feedback with their purchasing behavior.

Moving government activities to the private sector would make them more "public." Econo-

Economic progress depends on the ability of entrepreneurs to challenge existing providers. That is hard to do when the existing provider is the government.

Privatization and transparency go hand in hand.

mist John Blundell said that, where he grew up in England, a government water facility had posted a sign, Public Property: Keep Out. But after the facility was privatized, a new sign went up: Private Property: Public Welcome. ¹⁰³ Private businesses have an incentive to be transparent and promote good community relations.

British privatizations revealed problems that had been hidden inside government businesses, such as unknown debts, pension liabilities, and performance issues. ¹⁰⁴ With the privatization of the British nuclear industry, the large size of its financial problems was revealed. ¹⁰⁵ In preparing British Telecom for privatization, the Thatcher government found that the company "had not the faintest idea which of its activities were profitable and which were not." ¹⁰⁶ For British Airways, the government found undisclosed losses of hundreds of millions of British pounds as the company was being readied for privatization. ¹⁰⁷

In the U.S. government, the National Park Service provides few public details about the budgets of its individual parks and sites. ¹⁰⁸ By contrast, the private, nonprofit Mount Vernon estate in Virginia—home of George Washington—publishes audited financial statements showing how money is raised and spent. ¹⁰⁹

Or consider the USPS's accounting. The postal company provides some services in its legal monopoly and other services in competitive markets, but its financial statements make it difficult to determine how much it earns or loses on each. The company attributes a large share of costs to overhead, which hides internal cross-subsidies. Economist Robert Shapiro found that the USPS manipulates its accounting to raise prices on letters, and then uses the extra revenues to subsidize its express mail and package delivery.

Amtrak similarly hides cross-subsidies behind its opaque accounting, so it is difficult to determine the profits or losses on each of its routes. ¹¹² Amtrak also has a history of hiding information from investigators and of presenting unrealistic projections to Congress. ¹¹³

The Tennessee Valley Authority (TVA) has long been a secretive organization and immune from outside criticism, particularly with respect to its safety and environmental record.^{II4} Failures at its Kingston Fossil Plant in 2008 led to the largest coal ash spill in U.S. history. The TVA had been aware of the risk but failed to take needed steps to avert it.^{II5} Why? Federal auditors blamed TVA's management culture, which focuses on covering up mistakes.^{II6} At the TVA, a "litigation strategy seems to have prevailed over transparency and accountability," said the auditors.^{II7}

A final transparency issue is that federal agencies that operate services are often the same agencies that regulate them. The FAA operates air traffic control and regulates aviation safety. The Transportation Security Administration operates airport security and also regulates it. In such cases, privatizing the operations would eliminate the conflict of interest, and agency decisions that are now made internally would be made externally and publicly. This transparency issue is one reason the Thatcher government figured that—even if an industry had monopoly elements-privatizing that industry would improve it because the government regulator would be split off from the entity being regulated. 118 Privatization and transparency go hand in hand.

6. Ensures Efficient Pricing

Economic theory indicates that general welfare is maximized when prices for goods and services are set by supply and demand in competitive markets. With government goods and services, however, prices are often set too high or too low. Setting prices too high induces people to reduce their purchases, and they gain fewer benefits than optimal. Setting prices too low induces wasteful overconsumption.

The government tends to set prices based on political and bureaucratic factors, not market supplies and demands. That results in misallocating resources, meaning that capital, labor, land, and commodities are used in low-value ways that reduce overall welfare in society.

Government-owned resources are often underpriced. Irrigation water from federal dams in the western United States is subsidized, which reduces incentives for conservation. The use of federal lands is also subsidized in many cases. Some government agencies, such as the USPS, underprice some services and overprice others—they cross-subsidize.

An advantage of privatizing water, land, postal services, and other items is that private and unsubsidized providers set prices on the basis of supply and demand. Market pricing is efficient and fair. It is also environmentally friendly because it creates incentives to minimize waste. Privatizing water and opening water markets in the western states would ensure that water is not wasted on low-value crops when the rivers could produce more value by supporting recreation and wildlife. Privatizing Amtrak and ending rail subsidies would discourage the company from wasting energy running trains on low-value routes.

When the United Kingdom privatized its regional water utilities in the 1990s, people criticized the subsequent price increases. But water prices had been too low under government ownership, which encouraged overconsumption and wasteful leaks. Under privatization, leaks have fallen one-third over the past two decades. Privatization improves both efficiency and environmental stewardship.

7. Enhances Customer Service

Governments are often the butt of jokes for their poor customer service. Not all government agencies provide poor service, and people have bad experiences with private companies, of course. But public polling shows that Americans have a dim view of the service they receive from federal agencies. One poll found that just one-third of the public thinks that the government gives competent service. ¹²⁰ And an annual survey of the public's "customer satisfaction" with various public and private services found that satisfaction with federal services is lower than with virtually all private services. ¹²¹

The problem is one of incentives. Government employees usually receive no tips, promotions, or other benefits for providing good service. Unlike sales people in private companies, they do not have to compete to find customers,

so they have free rein to be unfriendly and slow.

A British Treasury study found that "most indicators of service quality have improved" in the privatized industries in that nation. ¹²² When British Telecom was privatized and opened to competition, the wait time for a new phone line fell from many months to two weeks. ¹²³

With British passenger rail privatization, on-time performance improved and customer satisfaction has been quite high, despite a huge increase in ridership.¹²⁴ With Japanese rail privatization, fares dipped modestly, accident rates plunged, and ridership increased.¹²⁵

In the United Kingdom's privatized water industry, supply interruptions are down, the number of customers with low water pressure has fallen, and water quality has improved.¹²⁶ Privatization is not just about efficiency, it is also about better serving public needs.

8. Removes Politics from Decisionmaking

Decisions in government organizations often reflect political factors that raise costs and misallocate spending. Comparing government and private ownership in the *Journal of Economic Perspectives*, economist Andrei Shleifer argued, "Elimination of politically motivated resource allocation has unquestionably been the principal benefit of privatization around the world."¹²⁷

A British finance expert said that in the years before Thatcher, "there had been frequent interference in running the nationalized industries," with politicians often making conflicting demands of companies, such as favoring higher prices one day and lower prices the next.¹²⁸ Before Thatcher, many coal mines were kept open, not because they made economic or environmental sense, but because the coal mining unions had political power.¹²⁹

In America, federal businesses are unable to end unneeded spending because members of Congress defend activities in their districts. To please politicians, Amtrak runs low-value routes that lose hundreds of dollars per passenger. And Congress blocks the USPS from consolidating mail processing centers and closing low-volume post offices. The agency's least-used 4,500 rural post offices average just

Market pricing is efficient and fair. It is also environmentally friendly because it creates incentives to minimize waste.

Government monopoly companies tend to be cut off from industry innovations occurring abroad.

4.4 customer visits a day. 130

The story of the FAA is similar. Politicians prevent the agency from closing unneeded air traffic control (ATC) facilities, and they prevent the elimination of jobs in FAA facilities in their districts. ¹³¹ They have even required the FAA "to procure certain hardware and encouraged it to select certain contractors." ¹³² Then there is the problem of "zombie" ATC towers:

More than 100 U.S. airport towers and radar rooms have so few flights that they should be shut down late at night under the government's own guidelines, a move that would save taxpayers \$10 million a year. Air-traffic controllers, who make a median \$108,000 annual wage, have little to do overnight at those locations, which remain open because of pressure from lawmakers who control the Federal Aviation Administration's budget. Members of Congress from both parties have blocked attempts to cut tower hours or merge radar rooms, according to interviews and documents. ¹³³

Such pork barrel politics make us all poorer by raising the costs of services. The environment also suffers because it is wasteful to run low-value trains and to keep open low-value ATC facilities and post offices.

9. Attracts Foreign Investment

One reason nations have pursued privatization has been to attract foreign investment. By selling equity in postal or energy companies, a country can attract foreign capital to help build its economy. A substantial share of privatization proceeds in OECD nations has come from foreign buyers. ¹³⁴

The British were the pioneers. The British Telecom privatization in 1984 was the largest IPO in world history to that date, and it was the first truly global share offering. The government set aside tranches of shares for international investors.

New Zealand pursued a large amount of privatization in 2013 and raised billions of dollars

by floating shares in numerous companies. Commenting on the sales, a New Zealand finance expert said, "Privatizations help the development of capital markets in terms of liquidity by attracting greater offshore and domestic participation and encouraging other unrelated listings."¹³⁶

Foreign investment is not just about attracting money. Capital inflows often come with inflows of foreign technology and management skills. An analysis of European privatization by Deutsche Bank said, "[W]hen foreign investors acquire stakes in companies, the influx of capital is in many cases also accompanied by an inflow of important expertise."¹³⁷

Government monopoly companies tend to be cut off from industry innovations occurring abroad. If European postal services adopt new and better practices, the current monopoly USPS could simply ignore them. By contrast, private postal companies would have incentives to adopt innovations from anywhere in the world. They could also hire foreign executives who have unique talents. The executive who led British postal reforms, for example, is a Canadian with experience in both privatization and the postal industry.¹³⁸ Privatization helps an economy take advantage of globalization.

10. Boosts Exports

Typically, federal government businesses do not export their goods and services. They have no incentive to do so. They are content to quietly fulfill their domestic roles. But that artificially restricts growth opportunities in our economy.

Private businesses that develop specialized products and expertise often pursue sales in both domestic and foreign markets. Those earnings are plowed back into the company, which encourages further research and product development.

Canada privatized its ATC system in 1996. The new company, Nav Canada, has become a leader in ATC innovation and has developed numerous technologies that it exports abroad. One expert noted, "The technical expertise at Nav Canada has led to a thriving business marketing innovative ATC hardware and software and advising other air navigation service providers on

modernization."¹³⁹ Nav Canada earns income from foreign contracts and royalties, which help fund its research program and benefit its domestic services.

There are other export successes from Canadian privatization. In 1986 the government privatized Canadian Arsenals, which was the entity that manufactured large-caliber ammunition for Canada's military. Today, the company is owned by General Dynamics; its manufacturing facilities supply not only Canada's military, but also the militaries of a dozen other countries. The company has developed a range of products that it sells internationally.

Canada also has an interesting history with its bank notes and postage stamps. The government has long contracted the printing of those products to the private Canadian Bank Note Company. The company has used its domestic expertise as a base to go global, and today it prints stamps, bank notes, and various high-end security products for more than 60 nations. ¹⁴¹ By contrast, bank note printing in the United States is a government monopoly carried out by the U.S. Bureau of Engraving and Printing, an agency that supplies only the domestic market.

The lesson is that we waste the talents of American workers when we keep business activities trapped inside the federal government. Moving in-house government activities to the private sector opens the door for workers to capitalize on their skills and sell their innovations worldwide.

11. Deepens and Broadens Equity Markets

An important goal of privatization in many countries has been to deepen equity markets and widen share ownership.¹⁴² Most privatizations include public share offerings, and many of the largest companies on exchanges around the world are formerly state-owned firms. By 2010, about half of the global stock market value outside of the United States was from companies that have been privatized in recent decades.¹⁴³

William Megginson found that privatization has "massively increased stock market capitalization and trading volume in many developing (and more than a few developed) countries."¹⁴⁴ The number of people who own common stock has increased in countries that have had major privatization programs. ¹⁴⁵ That point is important because larger and more efficient capital markets promote overall economic growth. ¹⁴⁶

As a result of British privatizations, the share of British citizens owning equities soared from 7 percent to 25 percent during the 1980s. ¹⁴⁷ British efforts to broaden share ownership with privatization influenced other countries. Germany, for example, heavily advertised its 1996 privatization of Deutsche Telekom and convinced two million citizens to buy shares. ¹⁴⁸

Privatizations have created new opportunities for households to save and allowed more people to benefit from economic growth. Investors around the globe have generally earned solid returns from share issue privatizations. That benefit of privatization is less relevant to the United States, which already has deep equity markets. Still, it was this "popular capitalism" aspect of Thatcher's program that helped inspire President Reagan to push for privatization in the United States. To

12. Benefits the Government Budget

America's economy would gain from federal privatization, and so would the government. The federal budget would benefit in three ways. First, sales of federal businesses and assets would raise revenues, which has been an important political motivator in many countries. As noted, privatizations have raised \$3.3 trillion for governments over the past three decades.

Second, subsidies to government businesses could be cut with privatization. Privatizing Amtrak, for example, would allow the rail system to run more efficiently. Money-losing routes could be eliminated, bloat could be reduced, and the government could end its more than \$1 billion in annual aid to the company. Similarly, privatizing the air traffic control system would allow it to be fully self-funded without the need for taxpayer subsidies.

Third, privatization would raise money for governments over time as newly privatized entities paid income, property, and other taxes Privatization helps an economy take advantage of globalization.

We waste the talents of American workers when we keep business activities trapped inside the federal government.

from which they are currently exempt. Government businesses and facilities do not pay federal or state income taxes, and generally they do not pay property taxes to local governments. Privatization would allow governments to broaden their tax bases, thus generating revenues that could be used to reduce overall tax rates.

Without major reforms, the federal government faces a financial crisis down the road as spending on entitlement programs soars in coming decades. Annual budget deficits are expected to rise from more than \$500 billion this year to more than \$1 trillion by 2022—and keep on rising after that. Policymakers should cut programs in every federal department. The main focus of reforms should be the major entitlements, such as Medicare and Medicaid, but privatization can make a modest positive contribution to fixing the government's fiscal woes as well.

OPPORTUNITIES FOR FEDERAL PRIVATIZATION

President Ronald Reagan started a discussion on federal privatization in the 1980s. His administration explored privatizing the postal service, railroads, electric utilities, the air traffic control system, and federal land. A Reaganappointed commission issued a major report in 1988 proposing various privatization options, but the administration's efforts mainly stalled. The administration did oversee the privatization of the National Consumer Cooperative Bank in 1981 and the freight railroad, Conrail, in 1987 for \$1.7 billion. Following Reagan, President George H. W. Bush issued an executive order supporting privatization, but he made little progress on reforms. To

President Bill Clinton had more success. During his administration, the Alaska Power Administration was sold in 1996 for \$87 million; the Elk Hills Naval Petroleum Reserve was sold in 1998 for \$3.7 billion; and the U.S. Enrichment Corporation was sold in 1998 for \$3.1 billion. 154 In 2000, Congress passed legislation putting Intelsat (owned by a consortium of governments) on the road to privatization. 155

The George W. Bush administration pro-

posed partly privatizing the Social Security retirement system, but that effort was blocked in Congress. On the other side of the ledger, Bush signed into law a bill nationalizing security screening at U.S. airports.

President Barack Obama's budget for 2014 proposed privatizing the Tennessee Valley Authority. The administration has also pursued the sale of excess federal buildings.

Recent decades have seen more of a focus on partial privatization. Under Presidents Bill Clinton and George W. Bush, for example, the Pentagon moved a large number of military families to 187,000 private housing units. That program has been very successful: housing quality has improved and costs are down. ¹⁵⁶ Also, recent administrations have encouraged private involvement in the U.S. space program, and a number of firms have won contracts to resupply the International Space Station.

Privatization will likely be on the agenda in coming years. Budget deficits are here to stay, so policymakers will be looking for ways to reduce spending and raise revenues. Policymakers will also be looking for ways to boost America's sluggish economic growth. As time passes, policymakers will be able to draw on ever more foreign privatization successes. We know that postal services, air traffic control, passenger railroads, and other activities can be successfully moved to the private sector because other countries have now done it.

Any activity that can be supported by customer charges, advertising, voluntary contributions, or other sorts of private support can be privatized. Government activities may be privatized as either for-profit businesses or nonprofit organizations, depending on the circumstances. The important thing is to move activities to the private sector, where they can grow, change, and be an organic part of society connected to the actual needs of citizens.

The following six sections look in detail at privatizing the USPS, Amtrak, TVA, air traffic control, land, and buildings. Following those discussions are shorter discussions of additional businesses and assets that the federal

government should privatize.

U.S. Postal Service

The USPS is a major business enterprise operated by the federal government. Revenues from the sale of USPS products are supposed to cover the company's costs. But with the rise of electronic communications, mail volume has plunged, and the 600,000-worker USPS has been losing billions of dollars a year. Other countries facing falling mail volume have privatized their systems and opened them to competition. America should follow suit and liberalize its postal industry so that it can adjust to changes in the modern Internet-based economy.

Congress confers on the USPS a legal monopoly over the delivery of certain types of mail: first-class mail (letters under 13 ounces) and standard mail (bulk advertising items). The USPS also has a legal monopoly on access to mailboxes, which is a unique protection among postal systems in the world. This system prevents entrepreneurs from competing in the postal industry to improve quality and reduce costs for the benefit of consumers.

The USPS also enjoys a range of other benefits:¹⁵⁸

- It has been able to borrow \$15 billion from the U.S. Treasury at subsidized interest rates.
- It is exempt from state and local sales, income, and property taxes and fees.
- It pays federal corporate income taxes, but those taxes are essentially circulated back to the USPS.
- It is not bound by local zoning ordinances, is immune from a range of civil actions, and has the power of eminent domain.
- It has government regulatory power, which it has used to impede competitors.

Despite those advantages, the USPS has lost more than \$50 billion since 2007 and will likely continue losing money unless there are major reforms. ¹⁵⁹ One problem is that Congress stymies USPS efforts to improve efficiency. It impedes USPS plans to close unneeded post office locations, even though the bottom 4,500 rural locations average just 4.4 customer visits a day. It blocks the consolidation of mail-processing centers, and it blocks USPS plans to end Saturday delivery. Private businesses make such adjustments to their operations all the time as demand for their products fluctuates.

The USPS's costly union workforce is another problem. USPS worker compensation is substantially higher, on average, than that of comparable private-sector workers. ¹⁶¹ Collective bargaining agreements—which cover more than four-fifths of the USPS workforce—make it more difficult for management to make cost-saving changes, such as increasing part-time work. And, in some cases, unions have resisted the automation of postal functions.

The postal system's financial challenges stem from the decline in first-class mail volume, which fell from a peak of 104 billion pieces in 2001 to 62 billion pieces in 2015, a 40 percent drop. The decline is driven by the rise of email, Facebook, Evite, and Internet bill paying; a decrease in printed magazines; and the rise of online advertising as an alternative to bulk print advertising.

The USPS's financial challenges have been compounded by a requirement passed in 2006 to pay down the company's large unfunded liabilities for retiree health care. ¹⁶³ USPS defenders complain that private companies are not required to prepay retiree health costs. But the vast majority of private firms do not even offer retiree health coverage. Also, since traditional mail faces a continued, long-term decline, it is better to tackle these costs now than to leave them to taxpayers down the road under a possible federal bailout.

Other nations with money-losing mail systems have either privatized them or opened them to competition—or both. Private companies have more flexibility to deal with today's challenges. And with the rise of the Internet, the claim that mail is a natural monopoly needing special protection is weaker than ever.

The European Union has recognized those

We know that postal services, air traffic control, passenger railroads, and other activities can be successfully moved to the private sector because other countries have now done it a contractive transport of the countries have now done it a contractive transport of the countries have now done it a contractive transport of the countries have now done it a contractive transport of the countries have now done it a contractive transport of the countries have now done it a contractive transport of the countries have now done it a contractive transport of the countries have now done it a contractive transport of the countries have now done it a contractive transport of the countries have now done it a contractive transport of the countries have now done it a contractive transport of the countries have now done it a contractive transport of the countries have now done it a contractive transport of the countries have now done it a contractive transport of the countries have now done it a contractive transport of the contra

Other countries facing falling mail volume have privatized their systems and opened them to competition. America should follow suit.

realities and pressed its member nations to deregulate their systems. Most European Union countries now have a more entrepreneurial postal industry than we do. The United States ranks near the bottom of the Consumer Postal Council's 26-country "Index of Postal Freedom." ¹⁶⁴

Here is a sampling of postal reforms abroad:

- Sweden in 1993 became the first major European country to repeal its postal monopoly. Sweden's main postal company (now PostNord) was put into a corporate structure but is still owned by the government.
- The Netherlands partly privatized its national postal company in 1994. Majority control shifted to the private sector in 1995, and the company later became part of TNT, a global delivery company. The Netherlands opened postal markets to competition in 2009.
- New Zealand cut costs at New Zealand Post in the 1980s and put the company into corporate form. The country repealed its postal monopoly in a series of laws during the 1980s and 1990s.
- Germany partly privatized Deutsche Post in a stock offering in 2000. Today, 79 percent of company shares are publicly traded. Germany opened its postal markets to competition in 2008.
- The United Kingdom opened postal markets to competition in 2006 and privatized the Royal Mail in share offerings in 2013 and 2015. 166

In many countries, dominant national carriers now have some competitors, often focused on niches such as business mail or bulk mail. Some privatized companies, such as Deutsche Post, have expanded internationally. Progress toward full competition has been a slow but steady process.

Experience has shown that both privatization and open competition create efficiency gains. In New Zealand and Sweden, government postal firms slashed their workforces by about one-third when they were restructured and opened to competition. ¹⁶⁷ Similar job cuts

were prompted when Germany and the Netherlands privatized their systems.

Congress should privatize the USPS, repeal its legal monopolies, and give the company the flexibility it needs to innovate and reduce costs. Those reforms would give entrepreneurs a chance to improve America's postal services. In 1979, when the USPS—under political pressure—lifted its monopoly over "extremely urgent" mail, we saw the growth of innovative private delivery firms such as FedEx.

Instead of privatization, some USPS supporters want the company to expand into banking, payday loans, grocery delivery, and other activities. But rather than solving any problems, such expansions would create more distortions. The USPS would have to find activities in which it could earn above-normal profits to funnel excess cash back to support the mail system. But a government agency—if not subsidized—is not likely to be able to out-compete private firms in other industries. Past USPS forays into nonmail areas, such as electronic bill paying, ended in failure. And if the USPS used its government advantages to undercut private firms, it would be both distortionary and unfair.

In a 2015 study, economist Robert Shapiro found that the USPS raises prices on its monopoly products and uses those revenues to subsidize express mail and package delivery. The agency is able to do so because consumers are less sensitive to prices for monopoly products than competitive products. Shapiro estimates that the cross-subsidies amount to \$3 billion or more a year.

For FedEx, United Parcel Service (UPS), and other private firms, however, such cross-subsidies are unfair because—unlike USPS—they have to pay taxes, borrow at market rates, and follow all the normal business laws and regulations. Shapiro thinks that without receiving special breaks, the USPS "probably could not compete at all" against the more nimble private firms. ¹⁷⁰

These problems are difficult to solve under the current postal structure because the USPS hides the cross-subsidies in its books by attributing a large share of costs to overhead.¹⁷¹ Thus a benefit of privatization and open competition would be

an increase in transparency in postal finances and pricing, and an end to the cross-subsidies.

Policy experts are coming around to the need for major reforms. Economist Robert Atkinson proposed that the USPS focus on delivering the "final mile" to homes, while opening collection, transportation, and the processing of mail to competition. ¹⁷² Elaine Kamarck of the Brookings Institution has also proposed partial privatization. ¹⁷³ She would split the USPS into a government piece that fulfills the "universal service mandate" for delivering mail to every address, and a privatized piece that would compete with other firms for activities such as collecting mail.

The Atkinson and Kamarck proposals move in the right direction, but foreign reforms show that full privatization is both feasible and consistent with universal service. In Germany, the United Kingdom, and the Netherlands, the dominant firms continue to provide universal service. Postal companies have a strong incentive to provide universal service because, as a network industry, the value to customers of the service increases the more addresses that are served.

USPS supporters fear that rural areas would be left out if the government no longer required universal service. But economist Richard Geddes argues that is probably not the case. ¹⁷⁴ Rural postal routes can be as cost-effective to serve as urban routes because rural letter carriers stay in their trucks and use roadside boxes, whereas urban letter carriers often walk their routes.

Economists Robert Carbaugh and Thomas Tenerelli looked at nations that have privatized or opened their postal systems to competition. They found that, rather than the price increases and service reductions that some people fear, "liberalizing countries have shown the ability to offer affordable, reliable, universal, and increasingly efficient postal-delivery services." ¹⁷⁵

U.S. policymakers should be more flexible with the idea of "universal service." For example, if delivery was reduced from six days a week to every second day, that change would allow the USPS to slash its massive fleet of 211,000 vehicles, which would reduce both costs and energy consumption. Other countries interpret universal service more narrowly than we do—

some countries have cluster boxes for communities, some exclude bulk mail from universal service requirements, and some allow more flexibility in pricing.¹⁷⁶

All that said, a universal service obligation for paper mail is not needed in the modern economy. Electronic communications bind the country together without it. Household-to-household personal letters have plunged to just 3 percent of total mail volume today.¹⁷⁷ Advertising represents 60 percent of the entire household mail volume. Bills and other business statements are the second largest type of mail, but those are being replaced by electronic bill payments, which now account for 63 percent of all bill payments.¹⁷⁸

Essentially then, Congress imposes a rigid monopoly on the nation so that we can continue to receive mainly "junk mail" in our mailboxes six days a week—while 205 billion emails blast around the planet every day.¹⁷⁹ Retaining special protections for the government's old-fashioned paper delivery system makes little sense.

In a Washington Post op-ed, former U.S. Postmaster General William Henderson said, "What the Postal Service needs now is nothing short of privatization." He is right. Congress should wake up to changes in technology and to postal reforms around the world. Other countries have shown that postal liberalization works, and it would work in America as well.

Amtrak

Private passenger rail service thrived in the United States between the mid–19th century and the early–20th century. By the late 1950s, however, passenger rail was struggling because of the rise of automobiles, buses, and airlines. Railroads faced large tax, regulatory, and union burdens not faced by other modes of transportation. The Interstate Commerce Commission micromanaged the railroads and prevented them from cutting excess costs. Railroads also paid heavy property taxes, and the federal government imposed a special excise tax on rail tickets from the 1940s until 1962.

After a number of major railroads, including Penn Central, went bankrupt, Congress stepped

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66 Congress imposes a rigid monopoly on the nation so that we can continue to receive mainly 'junk mail' in our mailboxes six days a week-while 205 billion emails blast around the planet every day. 99

in to take over passenger rail by creating Amtrak in 1970. Amtrak is structured like a corporation, but the government owns virtually all the stock. It was supposed to become self-supporting and begin earning profits after a transition period. But it has never earned a profit and has consumed more than \$40 billion in federal subsidies over four decades. In 2014 it had revenues of \$3.2 billion and expenses of \$4.3 billion, and it received direct federal subsidies of \$1.5 billion. ¹⁸²

Amtrak has many woes. Its operations are so inefficient that it even loses tens of millions of dollars a year on its food service. ¹⁸³ Amtrak's on-time service performance is poor. For the overall system, only about three-quarters of Amtrak's trains are on time, and its long-distance routes have a particularly bad record. ¹⁸⁴ The entire Amtrak system accounts for only a tiny fraction of America's passenger travel.

Amtrak has an expensive and inflexible workforce. It has 20,000 employees earning an average \$105,000 a year in wages and benefits. 185 The company pays a huge amount of overtime, a substantial amount of which seems to be unnecessary and improper.¹⁸⁶ More than a dozen collective bargaining agreements cover 86 percent of the workforce.¹⁸⁷ Unions undermine efficiency by protecting poorly performing workers and pushing for larger staffing levels than required. They resist innovation and create a more ruleladen workplace. Former Amtrak head David Gunn complained that at Amtrak's maintenance facilities, workers from different unions were not allowed to share work on projects outside their narrowly designated specialties. 188

With a rail system plagued by late trains and endless losses, Amtrak's management has been subject to much criticism. Over the years, federal auditors have charged Amtrak with a lack of strategic planning, inefficient procurement policies, weak financial management, and insufficient accountability. Auditors found that the company manipulated its financial statements to obscure unfavorable data.

However, most of Amtrak's problems are created by Congress, which prevents the company from making rational business decisions. In particular, Congress insists on supporting an excessively large nationwide system of passenger rail that does not make economic sense. Nor does it make environmental sense for Amtrak to run many routes that have low ridership.

Amtrak operates 44 routes on 21,000 miles of track in 46 states. Amtrak owns the trains, but freight rail companies own about 95 percent of the track. A 2008 analysis by the Pew Research Center found that the system loses money on 41 of its 44 routes, with an average loss per customer of \$32. 191 A 2012 analysis by Randal O'Toole found similar results—only four Amtrak routes earned an operational profit. 192 Some Amtrak routes lose hundreds of dollars per passenger and fill less than 40 percent of the seats.

The few routes that earn a positive return are in the Northeast, whereas the biggest money losers are the long-distance routes, such as New Orleans to Los Angeles.¹⁹³ The Government Accountability Office (GAO) found that the long-distance routes account for 15 percent of Amtrak riders but 80 percent of its financial losses.¹⁹⁴ In sum, Amtrak spends a lot of money maintaining high-loss routes at the expense of routes with heavier traffic.

Privatization would increase rail efficiency and bring costs down. A private rail company could prune excess workers, base worker pay on performance, and end harmful union rules. It could close the routes that are losing the most money. Passenger rail makes sense in the Northeast corridor between Boston and Washington, D.C., but that corridor accounts for less than 500 miles within a 21,000-mile system. Other routes may also make sense within a lower-cost privatized system. A privatized Amtrak could close the most uneconomic routes and shift investment and maintenance efforts to the core routes to improve service quality.

Reforms abroad show that privatizing passenger rail works. In a 2004 book, rail expert and former Amtrak spokesman Joseph Vranich counted dozens of nations that had either partly or fully privatized their passenger rail systems. He found that privatized rail systems generally provide better service, increased ridership, and more efficient operations. 196

In the United Kingdom, rail privatization brought entrepreneurial innovation to the industry. Vranich noted that "private operators have demonstrated more initiative, imagination, and visionary planning than state-run British Rail did in its prime or Amtrak does today." As already discussed, British rail ridership more than doubled in the 20 years since privatization, from 740 million passenger trips to 1.5 billion, far surpassing growth elsewhere in Europe. ¹⁹⁸

Japanese rail privatization provides useful lessons as well. In the 1980s, Japanese National Railways (JNR) was stagnating as a result of bloated labor costs, labor strife, and political manipulation. The government-owned JNR was "conservative, indolent, and fearful of change." The government broke up JNR into six regional and vertically integrated passenger rail companies in 1987, then started privatizing them in the 1990s.

The JNR companies reformed their rigid union rules and slashed their workforces by roughly one-third following the reforms. ²⁰⁰ A National Bureau of Economic Research study found that labor productivity in the Japanese passenger rail companies increased, on average, about 50 percent with the restructuring and privatization of the 1990s. ²⁰¹ It also found that accident rates were cut in half. The study concluded, "The Japanese approach to rail restructuring has succeeded in many ways, by improving productivity, cutting operating deficits, decreasing fares, and providing better services." ²⁰²

The privatized Japanese rail companies still receive subsidies, but they are more efficient than before and provide better service. Vranich called the results of JNR's privatization "stunning." Like Japan, the United Kingdom has continued to subsidize rail infrastructure after privatization, but the subsidies are less than elsewhere in Europe. The important thing is that the system is much more efficient, and ridership has soared. So while subsidies should be ultimately eliminated, the first job is to fix the rail system's institutional structure by privatization.

A Canadian example also illustrates the power of privatization. In 1990, the government-run passenger rail company, Via Rail Canada, was losing money and canceling services. Fortunately, an entrepreneur stepped in to run the routes through the Rocky Mountains. Today, the Rocky Mountaineer company operates four hugely successful routes in western Canada. Travel writers and international tourist organizations laud the services. ²⁰⁵

The United States has its own positive experience with rail privatization-freight rail privatization. When the Penn Central Railroad collapsed in 1970, it was the largest business failure in American history to that date. Other railroads followed it into bankruptcy. Congress created Conrail in the mid-1970s to replace the failed private railroads. The government-owned company consumed \$8 billion of subsidies and floundered until Congress finally deregulated freight rail under the Staggers Rail Act of 1980.²⁰⁶ Deregulation allowed Conrail to become profitable, and it was privatized in 1987. Since then, U.S. freight railroads operating in a deregulated environment have been a dramatic success. Rail's share of total U.S. freight has increased substantially in recent decades.²⁰⁷

Leading rail experts, including two former champions of Amtrak, support privatizing the company. Anthony Haswell founded the National Association of Railroad Passengers in 1967 and is referred to as the "father" of Amtrak. He lamented, "I feel personally embarrassed over what I helped to create." And Joseph Vranich, the former Amtrak spokesman, came to recognize that the government-run system was a mistake:

Amtrak is a massive failure because it's wedded to a failed paradigm. It runs trains that serve political purposes as opposed to being responsive to the marketplace. America needs passenger trains in selected areas, but it doesn't need Amtrak's antiquated route system, poor service and unreasonable operating deficits.²⁰⁹

Amtrak supporters argue that since other modes of transportation receive subsidies, so should passenger rail. But Amtrak currently receives vastly more subsidies—measured by subMost of Amtrak's problems are created by Congress, which prevents the company from making rational business decisions.

Labor productivity in the Japanese passenger rail companies increased, on average, about 50 percent with the restructuring and privatization of the 1990s. 99

sidies per passenger mile—than other modes of transportation, including automobiles, buses, and aviation. Automobiles receive relatively little in net subsidies because government highway spending is mainly covered by fuel taxes. That said, subsidies to all modes of transportation should be cut.

The problem for passenger rail is not that it needs more subsidies, but that competitors to rail have become much more efficient. Real rail prices have risen in recent decades, while real airline prices have plunged because of the deregulated and competitive airline environment. Intercity bus prices have also fallen with the rise of low-cost firms such as Megabus. To tackle air and bus competition, rail needs to be moved to a similarly private and deregulated environment.

Amtrak supporters say that we should subsidize passenger rail to reduce energy consumption and help the environment. But intercity buses are more energy efficient than trains, and thus better for the environment. And, as already noted, running half-empty trains over Amtrak's long-distance routes is a waste of energy.

It seems unlikely that passenger rail will play a big role in America's transportation future. Today, rail carries very few people compared with automobiles and airplanes. Even a high-speed rail system in the Northeast would reduce automobile use in that region by less than I percent, according to a Department of Transportation study.²¹³

But who knows? Maybe that assessment is wrong. Perhaps entrepreneurs could bring enough cost cutting, flexibility, and innovation to passenger rail that it could become financially viable in numerous U.S. corridors. We will never know unless we free passenger rail from the government.

Tennessee Valley Authority

The TVA is one of the largest electric utilities in the nation. It was created as part of the New Deal in 1933 by assembling land surrounding the Tennessee River and tributaries across seven states using land purchases and eminent domain. With the advantage of taxpayer funding and federal legal power, the TVA bullied private power

producers out of the way, removed more than 15,000 people from their land, and grew by selling power through municipal power distributors, which were also subsidized by the government.²¹⁴

The TVA was championed by progressives, who wanted to uplift the people in the Tennessee Valley with subsidized power, flood control, farming, and economic development. It turned out, however, that neighboring states with private power grew just as fast as Tennessee in subsequent decades, and they extended power to rural communities as fast as the TVA.²¹⁵

Today, the TVA generates and transmits power to nine million people. The power comes from a fuel combination of 34 percent coal, 34 percent nuclear, 11 percent oil and natural gas, 9 percent hydro, and 12 percent purchased power. The company has 10,900 employees and about \$11 billion in annual revenues.

The TVA is a legally protected monopoly within its service region, and it has unilateral authority to set its own rates without the regulatory reviews that private utilities elsewhere in the nation face. The company does not pay federal, state, or local income, property, or other taxes. It does make "payments in lieu of taxes" to state and local governments, but those are less than the typical taxes paid by private utilities. The TVA is mainly a wholesaler of power, selling it to 155 municipal and cooperative distributors, who in turn sell it to retail customers. In an anti-competitive twist, those local utilities must provide 5- to 15-year notices if they want to terminate their relationship with the TVA.

The government-owned TVA has become an anachronism, as the global trend for three decades has been to privatize electric utilities. In the United States, private-sector corporations dominate the electric generation and transmission industries. There is no theoretical or practical reason why the TVA should not be private.

If the TVA had a record of performing better than private utilities, government ownership might make sense. But the company has a poor record on both financial and environmental management. Privatizing it would create an institutional structure that would improve efficiency, reduce costs, create more transparency,

and allow for better environmental oversight.

A centerpiece of TVA's dysfunction has been its nuclear program, which has been problematic since the beginning. A 1985 *Washington Post* story provides a taste of the historic problems:

TVA had envisioned the most ambitious nuclear system in the United States, planning in three states to build 17 reactors capable of supplying 40 percent of the Tennessee Valley's power.

Today TVA is operating two atomic plants. Eight were abandoned while under construction. Three were shut down by TVA earlier this year following pressure from the [Nuclear Regulatory Commission (NRC)] over serious safety concerns. Four others, now partially built, have experienced substantial construction delays or have been questioned for safety reasons.

In the intervening years, according to a recent NRC report, TVA has been cited for more than 1,000 violations of NRC regulations, twice as many as an unidentified utility of comparable size and three times the national average.

In addition to a record number of fines and penalties, TVA appears to suffer serious internal problems and has been criticized by the NRC for mismanagement. Nuclear engineers and safety officials at TVA say they have so little confidence in TVA management and the regional NRC that they have bypassed the usual channels and gone to Capitol Hill to make serious allegations about the adequacy of the reactors' design and construction.

Their complaints have prompted four federal investigations, which are examining a host of charges, ranging from inadequate safety standards to harassment of whistle blowers.²²⁰

Many problems have afflicted the TVA's nuclear program, including ineffective leadership, management infighting, and a major fire at an Alabama plant.²²¹ The company ended up canceling a slew of nuclear plants during the 1980s for which it had spent \$5 billion.²²² In 1998 Ralph Nader opined, "TVA is by any measure the worst nuclear project in the country... [and] has the poorest safety record."²²³

In 2007, the TVA restarted its nuclear construction program with the building of the Watts Bar 2 plant. Just like past nuclear projects, this project went far over budget, with its cost rising from \$2.5 billion to about \$4.5 billion.²²⁴ Also, the TVA moved forward and then backward in recent years on completing two Bellefonte nuclear plants in Alabama that were originally started in the 1980s. The plants were almost complete, but now they appear to be canceled for good. The company spent a remarkable \$6 billion on the Bellefonte plants—spending that is now down the drain.²²⁵

Even when they are up and running, the TVA's nuclear plants have not been good performers. Operationally, they are generally less reliable than the nuclear plants of other companies. All of this is not surprising because the federal government's capital investments in general tend to be misallocated, mismanaged, and subject to cost overruns.

The TVA has another problem with capital investment: as a government entity, it cannot tap equity markets for financing, so it relies heavily on debt. The company is able to borrow at artificially low interest rates because it is part of the government, but that has created an incentive to borrow excessively. As a consequence, the TVA has built up a high debt load compared with private utilities, which makes its financial structure unstable. ²²⁸

On top of a large debt, the TVA has large unfunded obligations in its retirement plans. At the end of 2014, the TVA's pension plan was only 61 percent funded.²²⁹ A 2014 analysis found that the average pension funding level of six comparable private utilities was 96 percent.²³⁰ The utility also has a large unfunded obligation for postemployment health benefits.

The TVA has a poor environmental record. In 2008, mismanagement led to major environmental damage from a spill of five million

The government-owned Tennessee Valley Authority has become an anachronism, as the global trend for three decades has been to privatize electric utilities.

66 The Tennessee Valley Authority has a poor environmental record. In 2008, mismanagement led to major environmental damage from a spill of five million cubic yards of coal ash. 99

cubic yards of coal ash into the Emory River and across 300 acres of land at its Kingston Fossil Plant. That was the largest coal ash spill in U.S. history. *USA Today* said, "Enough muck spewed forth to fill a football field more than 2,500 feet into the air." The company had been aware of the risk of such an accident but had rejected ideas to fix the problem. ²³² It has since spent \$1.2 billion cleaning up the mess. ²³³

Private businesses also make mistakes that harm the environment. But over the decades, the TVA has been particularly irresponsible. As a government entity, it has been less transparent about its environmental and safety activities than private companies and more immune from outside criticism.

A 2009 study by the Environmental Integrity Project (EIP) found "a long history of environmental mismanagement" at the TVA.²³⁴ EIP found that the TVA

- "exemplifies some of the worst environmental practices in the utility industry";²³⁵
- spends less on coal-plant maintenance than private-sector utilities do;²³⁶
- has a "poor record of compliance with environmental law";²³⁷
- suffers from a "culture of neglect" that has created a "large and dirty" environmental footprint;²³⁸
- has "repeatedly invoked its status as a federal agency to avoid responsibility for its own environmental misconduct"; ²³⁹ and
- lags private utilities in adopting pollution controls, and indeed is "recalcitrant." ²⁴⁰

The utility's inspector general issued a critical report after the Kingston coal waste spill.²⁴¹ It blamed a corporate culture that focused on covering up mistakes rather than proactively reducing environmental risks. Furthermore, it stated that the TVA "avoided transparency and accountability in favor of preserving a litigation strategy."²⁴² In numerous investigations over 10 years, the inspector general repeatedly found noncompliance with safety policies and procedures.²⁴³

In the early years federal taxpayer dol-

lars heavily subsidized the TVA, allowing it to charge artificially low rates. But rates have risen substantially over the decades, partly because of the TVA's expensive mistakes. A 2014 study by former federal budget official Ken Glozer found that the utility has somewhat higher rates than utilities in nearby states today, despite the tax and regulatory advantages that it enjoys. ²⁴⁴ The TVA is exempt from a range of regulations that are imposed on private producers, it can borrow cheaply because it is owned by the government, and its power is sold at retail by subsidized local utilities.

Given those advantages, the TVA should be able to sell power for substantially less than if it were a private utility. But according to Glozer, the retail rates in its service area are higher than for other utilities in the overall region. He says the problem is that the TVA and its local distributors have become "highly inefficient" over time. Another study compared the TVA's operating and maintenance costs (other than fuel costs) with 18 other utilities and found that the TVA's costs were the highest. Apparently, the TVA's government-conferred cost advantages end up being consumed by the company's general bloat and mismanagement.

The TVA's employee compensation is generous. It pays its leaders not like civil servants, but like top-performing corporate executives. In 2015, its top five executives "were paid anywhere from five to 16 times more than what President Barack Obama is paid." TVA's CEO Bill Johnson has an annual compensation package of more than \$6 million, and four other executives are paid more than \$2 million. 19 In 2012 a Tennessee newspaper disclosed the company's salaries and found that 105 people were earning more than \$200,000. 1950 The company also gives its employees large performance bonuses. 19 percent below the U.S. average.

In sum, the TVA is compensating employees as if it were a very successful private company, but it is delivering the performance of a government bureaucracy. Then why not privatize it? That way its highly paid employees would be in an environment where they could generate

performances that match their compensation.

The attraction of electric utility socialism may be finally waning in America—more than two decades after the United Kingdom privatized its utilities. In the federal budget for 2014, President Obama proposed the "possible divestiture of TVA, in part or as a whole" because it may "no longer require federal participation." Obama is following in the footsteps of President Reagan, who also favored privatization.

Privatization would create incentives for the TVA's leaders to cut costs, improve environmental stewardship, and set power rates at efficient market levels. The company has a history of shady dealings, such as handing out noncompetitive contracts to cronies of company leaders and creating a secret retirement fund for executives. ²⁵³ Privatization would reduce those sorts of problems and make the TVA a more transparent and accountable organization.

The TVA has been profitable in recent years, so privatization would raise billions of dollars. An analyst for the investment research firm Morningstar told *Bloomberg.com* that the TVA might sell for \$30 billion to \$35 billion.²⁵⁴ Ken Glozer estimated a similar figure, between \$30 billion and \$40 billion.²⁵⁵ He noted that Duke Energy purchased Progress Energy in 2012 for \$32 billion, and Progress had somewhat lower revenues than the TVA.

Privatization would better ensure that the TVA's capital investments were allocated and managed efficiently. It would free the utility from costly prevailing wage labor rules. The federal budget would benefit because a privatized TVA would pay federal income taxes. And privatization would spare taxpayers from a possible future bailout stemming from the utility's high debt and pension obligations. ²⁵⁶

Policymakers could privatize the TVA through a public share offering or by a direct sale of portions of the company to utilities in neighboring states. ²⁵⁷ Some portions of the company not related to power production—such as recreational areas and nonpower dams—could be transferred to the ownership of state and local governments.

In recent years, the TVA has made some

reforms, including trimming its bloated labor force and canceling work on the Bellefonte nuclear plant. ²⁵⁸ Perhaps a Democratic administration in the White House that threatened to privatize it prompted the company to make changes. In other good news, the TVA's Watts Bar Unit 2 nuclear plant recently received a federal license to generate power. Those positive developments will help ease the transition to privatization and allow the government to command a higher sale price.

The editorial page of the *Chattanooga Times Free Press* favored privatizing the TVA in 2013.²⁵⁹ It listed four advantages: greater safety and accountability, environmental improvements, higher tax revenues for governments, and reduced financial risks of a possible tax-payer bailout. To those advantages, we could add greater operational efficiency, better capital investment management, and the potential to open the region to more competition. It is long past time to privatize the TVA.

Air Traffic Control

The Federal Aviation Administration (FAA) operates the nation's air traffic control (ATC) system, regulates aviation safety, and provides grants to airports. The agency's \$16 billion budget is mainly funded by taxes on aviation. ²⁶⁰ The FAA has 45,000 employees.

The FAA has struggled to modernize the ATC system. It still relies on 20th-century technologies, such as radar and voice radio, despite the development of newer technologies, such as satellite-based navigation and text communications. Air traffic control is a high-technology industry, yet we are still running it as an old-fashioned bureaucracy from Washington, D.C.

One of the problems with America's ATC is stifling bureaucracy. In a detailed analysis of the FAA's performance, economist Robert Poole found that the agency was risk averse and slow to make decisions.²⁶¹ It loses high-skilled workers to private industry because of a lack of federal pay flexibility and frustration with the government work environment. Poole found that the FAA "is slow to embrace promising innovations" and "is particularly resistant to

The Tennessee Valley Authority's government-conferred cost advantages end up being consumed by the company's general bloat and mismanagement.

66 Privatization would create incentives for the Tennessee Valley Authority's leaders to cut costs, improve environmental stewardship, and set power rates at efficient market levels. 99

high-potential innovations that would disrupt its own institutional status quo."²⁶² That is the opposite of what is needed in the dynamic, technology-dependent aviation industry.

Dorothy Robyn, a policy expert who worked in the Clinton and Obama administrations, examined ATC reforms in a Brookings Institution study. She concluded, "As a traditional government agency constrained by federal budget rules and micromanaged by Congress, the FAA is poorly suited to run what amounts to a capital-intensive, high-tech service business." She noted that as late at the 1990s the FAA was the nation's largest purchaser of vacuum tubes.

Another problem with our ATC system is Congress. Politicians, Robyn says, have "long blocked large-scale consolidation of the FAA's aging and inefficient facilities," and Congress "micromanages FAA spending on investment and maintenance." ²⁶⁴ The FAA's so-called zombie air traffic control towers, which receive little traffic, are another example of politically induced waste. Both Robyn and Poole propose that the ATC system be separated from direct federal control, as many other nations have done.

One concern of both Robyn and Poole is that the FAA both operates the ATC system and oversees aviation safety. That is a conflict of interest. A basic principle of good governance is that regulators should be independent of the entities they regulate. The International Civil Aviation Organization recommends just such a separation for the ATC. Separating the aviation regulator from the ATC operator would increase transparency because hidden decisions made internally within the FAA today would instead be made public. ²⁶⁵

A high-performing ATC system is important for the U.S. economy, yet the rising demand for air travel is expected to severely strain the FAA. Airspace is getting crowded and our antiquated ATC is causing delays, wasting fuel, and generating pollution. Transitioning to new technologies, such as satellite-based navigation, would increase safety while also raising airspace capacity, reducing delays, and saving fuel by allowing aircraft to fly more direct routes. New technologies would also

save costs by reducing the number of ATC facilities needed across the country.

The FAA has long struggled to upgrade its technology. A 2005 Department of Transportation study looked at 16 major ATC projects and found that the combined costs had risen from \$8.9 billion to \$14.5 billion. 266 A 2005 GAO analysis concluded, "For more than two decades, ATC system acquisitions under the National Airspace System modernization program have experienced significant cost growth, schedule delays, and performance problems." 267

A 2012 GAO report found that half of FAA's major acquisition programs were behind schedule. 268 And a 2016 auditor's report found that several critical programs "remain over budget and behind schedule due to overambitious plans, unresolved requirements, software development problems, ineffective contract management, and unreliable cost and schedule estimates." 269

The FAA has made some advances, but the 2016 auditor's report found that its "total budget, operations budget, and compensation costs have doubled while operational productivity... has decreased substantially."²⁷⁰ Another recent report found shortcomings in the FAA's workforce management, including too few qualified controllers at numerous major airports.²⁷¹

A report from the U.S. Travel Association warned that our "air traffic control system uses technology from the World War II era that causes systematic delays and cancellations," and that upgrades remain "mired by setbacks, cost overruns and delays as a result of FAA mismanagement" and budget cuts. ²⁷² A report from the Eno Center for Transportation found that "many stakeholders are losing confidence in FAA's ability to move forward" with technology upgrades. ²⁷³

Our ATC system needs to be restructured. Other nations have made their systems partly or fully independent of their governments. Canada privatized its ATC in 1996, creating a self-funded nonprofit corporation called Nav Canada. That reform was the model for legislation introduced by House Transportation and Infrastructure Committee chairman Bill Shuster (R-PA) in 2016, which would transfer

our system to an "independent, not-for-profit corporation" that would have a "self-sustaining, cost-based user fee structure."²⁷⁴ The legislation was passed out of committee but will likely not pass Congress this year.

Since privatization, Nav Canada has won three International Air Transport Association Eagle Awards as the world's best ATC provider. The association reports that Nav Canada is a "global leader in delivering top-class performance"; and its "strong track record of working closely with its customers to improve performance through regular and meaningful consultations, combined with technical and operational investments supported by extensive cost-benefit analysis, place it at the forefront of the industry's air navigation service providers." 276

In Canada, funding was changed from a government ticket tax to direct charges on aircraft operators for services provided. Nav Canada's revenues come from charges for en route and terminal services. Airlines are charged for flying through Canadian airspace and for landing at Canadian airports. Those cost-based charges are a more efficient way to price ATC services than the U.S. system, which is based on ticket fees and general federal revenues. Dorothy Robyn notes, for example, that the U.S. system biases airlines in favor of multiple small jets for routes, when a single larger jet would be more efficient from an ATC perspective.²⁷⁷

Nav Canada is a private monopoly, which might raise concerns that its user charges would rise excessively. But that has not happened. Indeed, Nav Canada's real customer charges have fallen by one-third over the past decade, as efficiency has increased.²⁷⁸ The system is handling 50 percent more traffic now than before privatization, but with 30 percent fewer employees.²⁷⁹ One reason for the good performance is that airlines and other aviation stakeholders are represented on Nav Canada's corporate board, and those stakeholders have a strong interest in increasing safety and efficiency while reducing costs.

People may also be concerned that an important institution such as ATC be open and transparent. That is what privatization can achieve. Nav Canada publishes regular reports

detailing its financial and operating metrics. For example, it publishes an in-depth annual safety plan and is proud to be among the top ATC systems worldwide for safety. One key metric known as losses of separation has been cut in half since privatization, as safety has improved. Another advantage of privatization is innovation. Nav Canada has become a leader in its field and is praised for its sound finances, solid management, and investment in new technologies. According to the company's former chairman, Nav Canada has "sold and installed our home-grown technology around the world from Australia to Hong Kong to Dubai, and all over the U.K. and Europe." 281

In Senate hearings in 2015, the head of the U.S. National Air Traffic Controllers Association described some of Canada's advantages:

They have the air traffic controller, the engineer, and the manufacturer working together from conceptual stage all the way through to training, implementation, and deployment within their facilities. And what that does is it saves time and money. And they actually are developing probably the best equipment out there, and they are selling it around the world. And they are doing it in a 30-month to three-year time frame, when we have to look much longer down the road because of our procurement process in this country.²⁸²

In 2016 the air traffic controllers association backed the Shuster legislation to move ATC to a nonprofit corporation.²⁸³ It may seem odd for a labor union to support such reforms, but the controllers are concerned that our ATC system is not receiving the steady funding and advanced technology that it needs. A self-funded system would create more financial stability than the current system, which is buffeted by chaotic federal budget battles.

A 2009 report by Glen McDougall and Alasdair Roberts compared the FAA to 10 partly or fully "commercialized" (or privatized) ATC systems in other countries.²⁸⁴ They looked at performance and safety data

Canada privatized its air traffic control in 1996, creating a self-funded nonprofit corporation called Nav Canada.

Nav Canada is handling 50 percent more traffic now than before privatization, but with 30 percent fewer employees.

and conducted hundreds of interviews with managers, workers, and users of the different systems. They found that, generally, service quality improved, safety improved, and costs were reduced with commercialization.²⁸⁵

A 2005 GAO study looked at the performance of commercial ATC systems in Australia, Canada, Germany, New Zealand, and the United Kingdom. It concluded that those systems had cut costs, invested in new technologies, and either maintained or increased safety. The United Kingdom privatized its ATC in 2001 as a for-profit business, called NATS, with ownership shares split between private investors, NATS workers, and the government. The British government has announced that it will sell its remaining stake in NATS.

In the United States, various studies and commissions since the 1970s have recommended ATC restructuring or privatization. ²⁸⁸ In the 1990s, the Clinton administration proposed separating ATC from the FAA and setting it up as a self-funded government corporation. ²⁸⁹ In 1997, the National Civil Aviation Review Commission, chaired by Norman Mineta, also proposed a self-funded ATC system. ²⁹⁰

Today, the dominant reform model is the Canadian system, which inspired the 2016 House legislation of chairman Shuster. Privatization would give ATC leaders the flexibility, incentives, and funding they need to improve efficiency and innovate. New technologies are the key to reducing flight times, cutting fuel costs, and minimizing the environmental impact of aviation. Privatization would also encourage America's ATC organization to develop technologies that it could sell globally.

In a recent interview, the head of Nav Canada, John Crichton, was blunt: "This business of ours has evolved long past the time when government should be in it. . . . Governments are not suited to run . . . dynamic, high-tech, 24-hour businesses." ²⁹¹

Western Lands

The federal government owns 640 million acres of land, which is 28 percent of the land in the United States.²⁹² It owns 61 percent of

the land in Alaska and 47 percent in the 11 coterminous western states, but just 4 percent of the land in the other 38 states. The federal agencies with the largest land holdings are the U.S. Forest Service (USFS) in the Department of Agriculture and the Bureau of Land Management (BLM), National Park Service (NPS), and Fish and Wildlife Service in the Department of the Interior (DOI).

Americans generally support federal ownership of the major national parks, such as Yellowstone. But many westerners have grown frustrated with the top-down controls on much of the federal land within their states. They want more local control because the economic and environmental decisions made in faraway Washington, D.C., often do not reflect their needs. Federal land and resource management has been bureaucratic, restrictive, and inefficient.

For more than a century after the nation's founding, the federal government's general policy was to sell or give away western lands to individuals, businesses, and state governments.²⁹³ The federal government privatized 792 million acres of land between 1781 and 1940.294 Some of those acres, for example, were privatized under Abraham Lincoln's Homestead Act of 1862. In addition, the federal government has transferred 471 million acres of land to state governments. The federal government, for example, transferred huge tracts of land to "western" states such as Illinois and Missouri when they gained statehood in the 19th century. The federal share of land in those middle states went from about 90 percent to less than 4 percent. Yet states farther west, such as Utah and Nevada, did not gain substantial ownership of their lands; instead, those lands remain mainly in the hands of the federal government.

By the turn of the 20th century, federal policy came under sway of progressives, who favored retention of lands and increased federal control. That approach continues today. The federal government's Land and Water Conservation Fund, for example, spends hundreds of millions of dollars a year on land purchases. ²⁹⁵ In addition, the federal government has increasingly restricted the use of western lands by

state residents through such actions as "national monument" designations. By 2015, President Obama had "established or expanded 19 national monuments for a total of more than 260 million acres of public lands and waters, more than any previous president." 296

Such designations generally reduce the use of lands for activities such as cattle grazing, logging, hunting, fishing, and off-road recreational vehicles. A slew of federal environmental laws passed since the 1960s adds another layer of restrictions on land use. The overall effect is that westerners have less control over their lands, resources, tax base, and economic development than do easterners. Federal agencies are increasingly putting up roadblocks to longstanding uses of federal lands. Since the 1950s, for example, the amount of grazing on BLM's 155 million acres of grazing lands has been cut roughly in half. Federal lands.

Some recent land-related protests against the federal government in the western states have attracted criticism because of the tactics that protestors used. But recent news articles have also captured the frustration of westerners about federal power grabs. ²⁹⁹ The *Wall Street Journal*, for example, profiled a north Texas rancher whose family had been grazing cattle on 900 acres of its own land for more than 70 years; then, to their shock, the BLM swooped in and grabbed 650 of those acres, claiming that the land was actually federal. ³⁰⁰

When the government does allow the use of its lands and resources, it often does not price them in a sound manner. It generally sets fees for grazing, water, recreational activities, mineral extraction, and other resources at below-market levels, which encourages overconsumption. As a result, federal lands cost taxpayers billions of dollars a year for administration costs, rather than producing a net return. Economists Terry Anderson, Vernon Smith, and Emily Simmons noted, "It is remarkable that the federal government actually loses money in the course of managing federal land assets estimated to be worth billions. Moreover, the federal government has a poor record of ecological stewardship."

A 2015 study by the Property and Environment Research Center compared western land

management by the BLM and the USFS with land management by four western state governments.302 It found that federal agencies generally lose money managing their lands and resources, while state governments earn a positive return. For example, the USFS generates just 32 cents for each dollar it spends on timber management, whereas state agencies earn an average \$2.51 for each dollar they spend. On rangeland management, the BLM earns just 14 cents for each dollar it spends, whereas state agencies earn an average of \$4.89 for each dollar they spend. The federal grazing fee in 2014 was just \$1.35 per "animal unit month," but the fees charged by the four state governments ranged from \$2.78 to \$11.41 per animal unit month.

In 2005 the GAO reported, "The grazing fees BLM and the Forest Service charge . . . [are] generally much lower than the fees charged by the other federal agencies, states, and private ranchers." The auditors found that grazing fees collected by the BLM are only about one-fifth the level needed for the agency to break even. The Congressional Budget Office came to similar conclusions: "The current formula appears to result in fees that are well below market rates and below the costs of administering the grazing program." 304

Federal grazing fees have remained at low levels in recent decades even though grazing fees on private lands have risen substantially in response to changing market supply and demand conditions.³⁰⁵ Another interesting factor is that, whereas the BLM sets its grazing fee annually for the entire western United States, private fees vary substantially in different locations, as one might expect in the marketplace.

Government pricing often causes distortions, and federal grazing fees are no exception. Artificially low federal grazing fees may encourage harmful overgrazing. However, the situation is complicated. Federal grazing permits are generally attached to particular parcels of private ranch lands, or base property.³⁰⁶ As such, low grazing fees are partly or fully capitalized in the value of those private lands. Therefore, current ranchers may not receive the benefits of the low federal grazing fees be-

Federal land and resource management has been bureaucratic, restrictive, and inefficient.

Federal agencies generally lose money managing their lands and resources, while state governments earn a positive return.

cause they would have paid a premium when they purchased their private land.³⁰⁷

This economic feature of western lands is the source of a lot of tension. The long-running battle between the BLM and Nevada rancher Cliven Bundy apparently stemmed from a 1993 BLM decision to cut back on his grazing on federal lands because of concerns about desert tortoises.³⁰⁸ Bundy and his family had long grazed the lands and had a valid permit to do so attached to his base private property. The tortoise decision imposed a large capital loss on Bundy's base property because its value is directly related to the amount of grazing it can support.

In a recent study, Shawn Regan of the Property and Environment Research Center noted that similar battles are going on all over the western United States because the current grazing system "encourages conflict, not negotiation."309 The BLM and USFS, under pressure from environmentalists, are imposing increasing restrictions on grazing lands, which is disrupting longstanding ranching activities and imposing capital losses on ranchers' private property. Part of the solution, according to Regan, is to allow ranchers more secure and tradable property rights in their use of grazing lands and allow them to transfer those rights directly to environmental groups that want to protect sensitive areas. Under that system, rather than lobbying politicians and officials and filling the courts with litigation, the energy of environmentalists would be channeled into voluntary conservation efforts in the marketplace.

A more thorough reform would be to begin privatizing BLM and USFS grazing lands. Economist Steve Hanke pursued BLM land privatization as a member of President Reagan's Council of Economic Advisers. He proposed that ranchers be offered the option to buy the grazing land that they currently rent from the government.³¹⁰ The price would be set so that the ranchers were charged for only that portion of the BLM land value that has not already been paid for through private ranch land premiums.

Privatization would create the benefit of secure property rights. The fact that grazing lands are currently government-owned makes ranchers insecure about their tenure, so they have an incentive to overstock grazing lands and a disincentive to make long-term investments to improve the lands.³¹¹ Such counterproductive incentives have increased as the government has made grazing tenures more precarious in recent decades. Thus, an advantage of privatization would be to provide ranchers more incentives to plan their rangeland management for the long term.

It is true that the BLM, USFS, and other federal agencies have difficult tasks. They are supposed to optimally manage the use of vast rangelands, timberlands, minerals, wildlife, water, and other resources. But rather than trying to price the use of those resources to ensure efficient use, federal agencies—under sway of politicians—generally misprice and misallocate resources.

Now let us consider the National Park System. The NPS operates more than 400 parks, monuments, historic sites, and other areas. The total acreage of NPS holdings has quadrupled from 20 million in 1940 to 85 million today. That is far too large an inventory to manage efficiently, and many NPS sites suffer from deterioration. Visitor centers are aging, artifacts are being vandalized, and historic structures are getting damaged. About 60 percent of the 27,000 NPS historic structures need repairs. The NPS and other DOI agencies have accumulated somewhere between \$14 billion and \$20 billion in deferred maintenance.

The primary blame lies with Congress because it keeps adding to NPS holdings without paying for the upkeep. In a report on the NPS, former U.S. Sen. Tom Coburn (R-OK) said, "Politicians would rather take credit for creating a new park in their community than caring for the parks that already exist." As a result, we end up with NPS sites such as the Eugene O'Neill facility in California, which receives only eight visitors a day but has nine full-time staff. Most of the least-visited parks and sites were established in recent decades, and these facilities steer NPS resources away from the older "national jewels" such as Yellowstone.

Another problem is that NPS does not

charge visitors in an efficient manner. Some NPS parks and sites charge users, but others do not. Great Smoky Mountains National Park is the most visited national park, yet it does not charge an entrance fee at all, even though a modest fee of just \$2 would cover its operating costs.³¹⁷ The overall average charge for almost 300 million annual NPS visitors in 2012 was just 63 cents.³¹⁸ The study by the Property and Environment Research Center found a similar pattern of low fees that do not cover expenses for USFS and BLM recreation areas.

This discussion only scratches the surface of the complex issues surrounding federal land holdings. There are contentious issues regarding wildlife management, endangered species, wildfires, energy and mining activities, and allowable recreational activities. Many industries and jobs depend on the use of federal lands and resources, so legislative and regulatory restrictions on access affect state economies and many state residents.

As noted, there is great frustration about the heavy-handed way that federal officials impose rigid regulations on western lands and resources.³¹⁹ The core problem is that federal politicians and agency leaders are far removed from the costs and benefits of their decisions. They cannot fairly balance all the economic and environmental concerns within each state.

What the federal government essentially tries to do is centrally plan the interactions of millions of citizens with 640 million acres of land and resources. A recent example showing the difficulty of central planning is the government-created overpopulation of wild horses on BLM lands.³²⁰ A 1971 statutory change sought to protect the horses; but the change eliminated all the population-balancing mechanisms, so now there are far too many horses in some western states, and BLM has failed to find an administrative solution. A similar overpopulation problem with federally protected burros on BLM lands is playing out in Arizona.³²¹

A final problem with federal land management is that federal land agencies are subject to all the usual bureaucratic failings. For example, DOI's inspector general testified before Con-

gress in 2006, "Simply stated, short of a crime, anything goes at the highest levels of the Department of the Interior." He lambasted the ethics failures of DOI leaders and their "bureaucratic bungling" of oil and gas leases that cost billions of dollars in lost revenues. That case was typical of a "culture of managerial irresponsibility and lack of accountability" at DOI, he noted. Another example of DOI mismanagement was the negligent way that it mishandled billions of dollars of royalties that were supposed to be accumulating in Indian trust funds during the 20th century.

The best reform for federal lands is the original one—transferring them to state governments and private owners. Many parks, grazing lands, historical sites, and other assets should be either privatized or transferred to state and local governments. Residents of the western states can better balance the competing needs of agriculture, ranching, industry, recreation, wildlife, and environmental stewardship than policymakers in Washington, D.C.

For many NPS parks and sites, most of the visitors live in state; thus, state ownership makes more sense than federal ownership. Alternatively, individual parks and sites could be transferred to private nonprofit organizations. Yet another option would be for state governments to retain ownership of lands but devolve operation and maintenance of parks to private concessionaires. For some parks, the USFS and numerous state governments currently use that sort of partial privatization.³²⁵

For environmentally sensitive lands, an important development is the growth of conservation land trusts. These organizations "have emerged in recent years as central actors in land conservation," noted Resources for the Future in 2009.³²⁶ The number of land trusts in the nation soared from 400 in 1980 to more than 1,700 today.³²⁷ These organizations include well-known groups such as the Nature Conservancy and Ducks Unlimited. Currently, 50 million acres are being conserved by land trusts through ownership, easements, or other means.³²⁸

Nonprofit groups offer a more efficient way to manage environmental resources than gov**66** The Bureau of Land Management and U.S. **Forest Service** are imposing increasing restrictions on grazing lands, which is disrupting ranching activities and imposing capital losses on ranchers' private property. 99

Residents of the western states can better balance the competing needs of agriculture, ranching, industry, recreation, wildlife, and environmental stewardship than policymakers in Washington, D.C. 99

ernments. One reason is that nonprofits usually benefit from extensive volunteer efforts. The Land Trust Alliance estimates that almost 350,000 volunteers nationwide take part in managing land trusts.³²⁹ The private, charitable sector is unique in the way it taps this vast workforce of low-cost, flexible, and dedicated individuals.

New York City has numerous examples of volunteer park efforts. The Central Park Conservancy has managed Central Park since the 1990s.³³⁰ The group raises the bulk of funding for the park's maintenance from donations, and it relies extensively on volunteers in its operations. Bryant Park, which was restored from dereliction in the 1980s by private efforts, is now managed and funded by a nonprofit corporation.³³¹ And the very successful High Line Park was conceived by a private group and partly funded by \$44 million in private donations.³³²

Privatizing federal parks would increase transparency. As already noted, Coburn's study found that the NPS provides almost no detail to the public about how individual parks spend their money. By contrast, the private, nonprofit association that runs Mount Vernon, home of George Washington, publishes audited financial statements.³³³ Mount Vernon relies on private support and does not receive government funding.

In recent years, numerous western states have passed legislation calling for the transfer of federal lands to the states.³³⁴ At the federal level, the next administration should create a detailed inventory of land and resource holdings and identify those assets that can be moved to state and private ownership. Congress and the administration should then work with the states and begin paring back the vast federal estate.

Buildings and Structures

The federal government owns or leases 275,000 buildings, including offices, warehouses, and health facilities.³³⁵ The government also owns or leases 481,000 structures, such as parking lots and bridges. The annual operating costs for the buildings and structures is \$30 billion.³³⁶ The replacement value

of federal buildings and structures was estimated at \$1.5 trillion in 2007.³³⁷

The federal government is a poor asset manager. The GAO has had federal real property on its "high risk" waste list for years and found that "many assets are in an alarming state of deterioration."³³⁸ A House committee examining federal building mismanagement found that buildings in prime locations in some cities have been left empty for years.³³⁹ The committee also found that agencies grabbed excessive office space, wasted money by not coordinating with each other, and incurred excessive lease costs.

The GAO noted that the government has "many assets it does not need."³⁴⁰ The Obama administration found that "agencies have accumulated properties in excess of what the government needs to effectively meet its mission. This has resulted in a large number of excess properties and underutilized or unutilized properties in the portfolio."³⁴¹ According to one estimate, the government has 77,000 buildings that are unused or underused.³⁴²

Excess federal buildings and structures should be sold. That would put them into more productive private uses, and boost overall efficiency in the economy. Selling assets would reap a short-term revenue gain for the government, and it would broaden the property and income tax bases—to the benefit of all levels of government.

Unfortunately, there are bureaucratic hurdles to selling federal buildings. One problem is that the government does not know exactly what it owns. The GAO says that the federal government has a "lack of accurate and useful data to support decisionmaking" on its properties.³⁴³ The government's property database held by the General Services Administration is riddled with inaccuracies, such as faulty data on building conditions, costs, and valuations.³⁴⁴ Oddly, the database is also apparently withheld from Congress because it is "proprietary."³⁴⁵

Another problem is that the process of selling properties is lengthy, convoluted, and costly.³⁴⁶ Legally, properties must meet standards of repair and environmental remediation

before sale, but agencies often do not have enough budgeted funds for that. Another hurdle is that all surplus property must be evaluated for possible use by homeless persons, and that evaluation—believe it or not—can take two years to complete.³⁴⁷

As a result of such hurdles, many agencies put little effort into selling unneeded assets. One solution would be for Congress to mandate that agencies sell a certain dollar value of assets by a specific date. To give agencies an added incentive, they would keep a modest portion of sale proceeds. That approach was proposed in a bill introduced by Rep. Jason Chaffetz (R-UT).³⁴⁸

There is hope for bipartisan reforms. President Obama issued a memorandum in June 2010 that encouraged agencies to identify excess assets and sell them.³⁴⁹ He argued that privatizing unneeded federal buildings would be good for both taxpayers and the environment. Obama noted, for example, that private data centers had become more energy efficient over time, but government data centers had not.

Obama administration official Jeffrey Zients said that hurdles to federal property sales include a culture of inertia, lack of funding in agency budgets for sales transactions, politicians who prefer ribbon-cutting on new facilities over selling unneeded ones, and 20 different laws that govern federal sales.³⁵⁰ Nonetheless, the administration has reported some progress on property reforms, and in 2015, it released a "national strategy" to continue the progress.³⁵¹

Those efforts are positive but too modest. With a general downsizing of the federal government, most federal buildings and structures could be sold. For example, the Department of Agriculture owns 21,000 buildings and 18,000 structures, which have a market value of \$30 billion or more. The government were to abolish farm subsidy programs and devolve the food stamp program to the states, most of that infrastructure could be sold. The government would also create savings in the department's building operating costs, which are \$600 million a year. The government would are \$600 million a year.

In the United Kingdom, the government

launched a Right to Contest initiative, under which citizens who think that particular plots of government land or buildings are not being used efficiently can ask for an official review.³⁵⁴ The government also created a website for citizens to examine the status of particular government properties across the nation.³⁵⁵ When those initiatives were launched in 2014, the official in charge said government "should not act as some kind of compulsive hoarder of land and property."³⁵⁶ We need less "compulsive hoarding" by government on this side of the pond as well.

OTHER PRIVATIZATION OPPORTUNITIES

Power Marketing Administrations

The federal government owns the Bonneville Power Administration, the Southeastern Power Administration, the Southwestern Power Administration, and the Western Area Power Administration. These four utilities transmit wholesale electricity in 33 states. The power is mainly generated by the 130 hydroelectric plants owned by the Army Corps of Engineers and Bureau of Reclamation. Power Marketing Administrations (PMAs) account for 7 percent of U.S. electricity consumption.³⁵⁷

The PMAs sell most of their power at below-market rates to "preference" customers, meaning utilities owned by local governments and more than 600 nonprofit rural electric cooperatives.³⁵⁸ The PMAs and utilities benefit from numerous subsidies. None of them pay federal or state income taxes.³⁵⁹ The local utilities issue tax-exempt bonds. The PMAs can borrow from the U.S. Treasury at favorable rates, and PMA bonds have implicit federal backing. Finally, some of the PMAs receive direct subsidies from federal appropriations, which totaled \$368 million in 2015.³⁶⁰

Those subsidies distort the economy; they also harm the environment because they result in artificially low prices, which encourage overconsumption.³⁶¹ However, a portion of the subsidies are likely dissipated by government inefficiencies, rather than benefiting consumers.

The federal government owns or leases 275,000 buildings. The government also owns or leases 481,000 structures.

Government 'should not act as some kind of compulsive hoarder of land and property.'

A Congressional Budget Office study in 1997 found that the "managerial structure of the federal power program... makes it hard to operate efficiently." And it found "inadequate maintenance of power assets—a problem that applies to all of the federal power agencies—and low utilization rates of hydropower generating capacity." Private hydro dams "produced an average of 20 percent more electricity per unit of capacity than did [federal] dams supplying the power marketing administrations." In addition to these hydropower shortcomings, one PMA—Bonneville—also has a history of supporting boondoggle nuclear plants.

The Congressional Budget Office has concluded that the reasons for federal ownership of electricity assets that "might have been appropriate in the 1930s are no longer valid."³⁶⁶ That is true. There is no need for the government to be in the hydropower business today, especially since more than two-thirds of U.S. hydropower plants are already owned privately.³⁶⁷

The PMAs and the generating plants owned by the Army Corps of Engineers and Bureau of Reclamation should be privatized. That would increase operating efficiency and allow prices to be set at market rates, thus ending incentives to overconsume power. For the government, privatization would reduce spending by ending subsidies, while raising revenue from the asset sales and taxation of the privatized entities.

President Reagan proposed privatizing the PMAs in his 1986 budget. President Clinton oversaw the sale of the Alaska Power Administration in 1996 but was unable to sell the other PMAs. Congress should dust off the Clinton reform plans and let the private sector run the electricity industry.

Army Corps of Engineers

The civilian part of the Army Corps of Engineers has more than 20,000 employees and annual net outlays of \$7 billion. It constructs and maintains water infrastructure such as locks, waterways, and flood control structures. It owns and operates 75 hydropower plants, manages more than 4,000 recreational areas,

and performs other engineering and construction activities, such as dredging seaports.

Although the Corps has built some impressive structures, it also has a history of scandals and failures, including the disastrous levee failures in New Orleans during Hurricane Katrina in 2005. Congress has long used the agency as a pork barrel spending machine, often directing funds to low-value projects in the districts of important members of Congress.

The Corps does the analyses of proposed projects that it will build itself, creating a bias toward large and expensive projects. The Pentagon's inspector general found that the Corps has a "systemic bias" toward major construction and has been known to do bogus studies to justify costly projects. ³⁶⁸ A number of years ago, leaked internal memoranda by Corps leaders revealed a strategy to "get creative" in accounting in order to "get to yes as fast as possible" on proposed projects. ³⁶⁹

The Corps has a poor environmental record because of its pro-construction tilt. It has "channelized dozens of rivers for barges that never arrived."^{37°} And its navigation and flood-control structures on the Mississippi and other rivers may have made flooding worse by forcing rivers into narrow channels, destroying wetlands, and encouraging the development of flood-prone areas.³⁷¹ In his classic 1993 book on federal water infrastructure, *Cadillac Desert*, Marc Reisner said that the Corps has "ruined more wetlands than anyone in history, except perhaps its counterpart in the Soviet Union."³⁷²

A 1971 book by distinguished engineer Arthur Morgan, *Dams and Other Disasters*, castigated the Corps for its arrogance and mismanagement.³⁷³ It described how the agency underestimated the costs of projects, followed shoddy engineering practices, lied to the public, hid information, and pursued environmentally damaging projects. Former U.S. Senate majority leader Tom Daschle said the Corps is "one of the most incompetent and inept organizations in all the federal government."³⁷⁴

Here is the good news: we do not need a federal agency to build civilian water infrastructure. The Corps is filling roles that private engineering

and construction companies could fill. When the states need to construct and maintain levees, harbors, beaches, inland waterways, and recreational areas, they should hire private companies to do the work. The Army Corps of Engineers should be privatized and compete for such work.

Consider the Corps' harbor maintenance activities, which are funded by a federal harbor maintenance tax collected from shippers on the basis of the value of cargo. The tax generates about \$1.6 billion a year and is spent on projects chosen by Congress and the Corps. But the federal government is an unneeded middleman here—local seaport authorities could impose their own charges on shippers to fund their own dredging and maintenance activities. That way, seaports could respond directly to market demands, rather than having to lobby Washington for funding.

The Corps' 75 hydropower plants should also be privatized. More than two-thirds of U.S. hydropower plants are owned privately, and those plants produce more than one-quarter of U.S. hydropower.³⁷⁵ While federal facilities dominate hydropower in the western United States, eastern states such as New York and North Carolina have substantial private hydropower. The private sector is entirely capable of owning and operating hydropower plants.

Bureau of Reclamation

The federal Bureau of Reclamation is at the center of water policy in the arid American West. For more than a century, the agency has built and operated dams, canals, and hydropower plants in the 17 western states. It owns 76 hydropower plants and is the largest wholesaler of water in the nation.³⁷⁶ It has 5,200 employees and net budget outlays of \$1.5 billion annually.

Reclamation's policies have created economic distortions and environmental damage. Numerous dams were not worth the cost of construction and only won approval because of pork barrel politics. About four-fifths of the water that Reclamation supplies today goes to farmers, who receive it at a fraction of its market value. Subsidized irrigation water causes various environmental harms, including inef-

ficient water use, high salinization levels in rivers, and damage to wetlands.

In the 19th century, irrigation was a state, local, and private concern. The Mormons, for example, arrived in Salt Lake Valley in 1847 and within a year had created an irrigation system covering 5,000 acres.³⁷⁷ But lobbying by western interests, such as the railroads, paid off with the Reclamation Act of 1902, which launched massive federal dam building. From the beginning, projects were chosen based on politics, not because they made sense on a cost–benefit basis.³⁷⁸

Despite Reclamation's huge investments to increase supply, the western United States is in the midst of a serious water crisis today. Groundwater levels are falling and surface sources of water are tapped out. Major river systems in the west have been engineered by federal and state water infrastructure to maximize water consumption. But the drought of recent years has exposed longstanding failures in government policies.

The underlying problems of western water stem from misguided policies on water prices and water transfers. Governments have kept prices artificially low for so long that they have encouraged water use in low-value activities. Water subsidies combined with federal farm subsidies have encouraged inefficient agricultural production.

Restrictions on water transfers between users add to the problems. Surface water in the western states is generally allocated by government rules, not by markets. Farmers who receive Reclamation water often do not have the option to resell it, so it gets locked into low-value uses. Water-shortages are often caused by restrictions on transfers, not overall supply problems. The solution is to end the subsidies and liberalize rules on transfers so that water prices reflect market supply and demand. That would promote efficiency and benefit the environment.

Water policy issues are hugely contentious in the western states. In the long run, they cannot be solved in Washington, nor should they be. Water policy should be handled by the states, which should control their own water infrastrucThe Power Marketing Administrations and the generating plants owned by the Army Corps of Engineers and Bureau of Reclamation should be privatized.

The underlying problems of western water stem from misguided policies on water prices and water transfers.

ture. Congress should transfer water infrastructure to state and local governments, who in turn should consider privatizing it. The single largest Reclamation project is the Central Valley Project; its huge facilities are all located in California and should be transferred to that state.

In the 1990s, efforts were made to devolve Reclamation facilities. Under its "reinventing government" initiative, the Clinton administration sold federal water projects to local irrigation districts.³⁷⁹ About 19 Reclamation projects were transferred to nonfederal owners.³⁸⁰ Experience has shown that local control of water infrastructure increases efficiency as a result of lower labor costs, less paperwork, and faster decisionmaking.³⁸¹

Congress should privatize the 76 hydropower plants owned by Reclamation. That reform should be combined with privatizing the PMAs that transmit the power produced in Reclamation dams.

In a 2015 book, former commissioner of the Bureau of Reclamation Daniel Beard describes how the agency "destroyed hundreds of miles of free-flowing rivers, promoted excessive water use, and sent billions of dollars in subsidies to a small number of people." With decades of expertise on water issues under his belt, Beard called for abolishing the Bureau of Reclamation, and Congress should heed his advice.

Transportation Security Administration

The government nationalized airline security screening in 2001 with the creation of the Transportation Security Administration (TSA). Today, TSA operates screening at about 450 commercial airports. It has 59,000 employees and net annual outlays of about \$5 billion.

The government takeover of airport screening was a mistake. Federal auditors have found that TSA's screening performance has been no better, and possibly worse, than private screening. TSA has become known for mismanagement, dubious investments, and security failures.

A House committee reported in 2012 that TSA's operations are "costly, counterintuitive, and poorly executed." A House report in

2011 said that TSA "suffers from bureaucratic morass and mismanagement."³⁸⁴ And former TSA chief Kip Hawley said that the agency is "hopelessly bureaucratic."³⁸⁵

In undercover tests in 2015, investigators slipped guns and fake bombs past TSA screeners at numerous airports a remarkable 95 percent of the times they tested. That result prompted a former TSA chief to comment, "[I]t's just completely unacceptable to have such a high failure rate." 386

The government conducts annual surveys on employee satisfaction in more than 200 federal agencies, and TSA is usually ranked one of the worst.³⁸⁷ TSA has high workforce turnover, and there are frequent reports of employee misconduct.³⁸⁸ A House committee report described the agency as "an enormous, inflexible and distracted bureaucracy" that has "lost its focus on transportation security."³⁸⁹

TSA misallocates its investment. It spends more than \$200 million a year on the Screening of Passengers by Observation Techniques (SPOT) program, which tries to catch terrorists by their suspicious behaviors in airports. According to the GAO, TSA deployed SPOT nationwide before validating the science behind it. The GAO found little, if any, evidence that SPOT works and recommended that it be canceled, but the program continues to receive funding.³⁹⁰

TSA spent hundreds of millions of dollars on poorly performing full-body scanners from 2009 to 2013. These were the backscatter radiation machines that caused a civil liberties backlash because of the nude images they showed. After the machines were withdrawn from airports, a team of outside experts tested them. They reported in 2014 that terrorists carrying various types of weapons and explosives could have easily fooled the machines.³⁹¹

The problem is that TSA is a secretive near monopoly. It is difficult for policymakers and the public to judge the agency's performance and hold it accountable for results. The solution is to devolve airport screening operations to the nation's airports. Airports would then be able to contract security operations to

expert private firms. That would allow diversity and innovation in security techniques and management, and allow open comparisons of performance across airports.

Congress has allowed more than a dozen U.S. airports to use private screeners, which makes possible some comparisons. Over the past decade, numerous studies have found that private screeners perform on security at least as well as, if not better than, government screeners.³⁹² Private screeners at San Francisco International Airport, for example, have been found to perform better than federal screeners at Los Angeles International Airport.

Devolving all screening operations to the nation's airports would end the conflict of interest stemming from TSA's roles as both overseer and operator of screening. Under a restructured system, the federal government would retain its role in aviation oversight and security intelligence. But airports would hire aviation security firms to screen; if those firms did not achieve high-quality results, airports could fire them. Private firms have incentives to invest in procedures that add security in the most efficient manner.

Most other high-income nations use private airport screening. More than 80 percent of Europe's commercial airports use private screening, including those in the United Kingdom, France, Germany, and Spain. Canada uses private screening at all its major airports. After 9/11, Canada created an oversight agency for aviation security, but the screening itself is done by private firms, which compete for contracts to handle different airports. Private businesses make mistakes, but unlike government bureaucracies, they are more likely to improve their performance over time, especially when they face competition.

Veterans Health Administration

The Veterans Health Administration (VHA) will spend \$68 billion this year on its system of 150 medical centers, 1,400 clinics, and numerous other facilities for veterans. The VHA owns the facilities and employs about 320,000 doctors, nurses, and administrators to operate

the system.³⁹⁴ The VHA is an outlier in American health care, as even the giant Medicare and Medicaid programs rely on services provided through privately owned and operated health facilities. The VHA system serves about 8 million veterans each year.³⁹⁵

The VHA suffers from the usual problems of government monopolies, such as the misallocation of resources, excessive bureaucracy, congestion, and a lack of transparency. VHA's facilities, for example, are overcrowded in the states where the population of veterans is growing, but they have excess capacity in other states. Allocation of resources is based partly on political factors, not market demands.

The VHA has a huge backlog of about 900,000 pending applications from veterans, and many veterans face long waits for doctor appointments.³⁹⁶ VHA capital investment is inefficient and often results in large cost overruns. GAO studied the four largest VHA hospital construction projects in 2013 and found that the combined costs of the projects had doubled.³⁹⁷ GAO pinned the blame on "weaknesses in VA's construction management processes."³⁹⁸

A major scandal erupted in 2014 regarding waiting lists for VHA services. Investigators found that many veterans face excessively long waits, with some veterans dying before their scheduled appointments. VHA administrators were found to routinely falsify data to hide the long wait times. The scandal initially focused on the Phoenix VHA hospital, but investigators found that improper and fraudulent scheduling practices were a "nationwide systemic problem."³⁹⁹ A September 2015 report from the VA's Inspector General found that the agency's system for tracking patient enrollments was a mess.⁴⁰⁰

A 2014 report from the Obama White House lambasted the VHA, saying it suffered from "significant and chronic system failures." "The system has a "corrosive culture of distrust," "acts with little accountability or transparency," and "encourages discontent and backlash against employees." The White House report also said that the VHA has unresponsive leadership and its insularity has impeded innovation and change.

In undercover tests in 2015, investigators slipped guns and fake bombs past **Transportation** Administration Security screeners at numerous airports a remarkable 95 percent of the times they tested.

The VHA suffers from the usual problems of government monopolies, such as the misallocation of resources, excessive bureaucracy, congestion, and a lack of transparency.

Even Sen. Bernie Sanders (D-VT) chimed in: "No organization the size of VA can operate effectively without a high level of transparency and accountability. . . . Clearly, that is not the case now at the VA." But the mistake Sanders and others make is to think that simple management reforms can fix such problems. They do not realize that these sorts of problems are endemic and systemic in large federal bureaucracies, particularly monopolies such as VHA.

Fundamental reforms are needed in the direction of privatizing veterans' care. In response to the crisis, Congress passed a law in 2014 that included a Choice Card allowing some veterans to go to private health facilities if they were not able to get an appointment within 30 days or if they lived more than 40 miles from a VHA facility. ⁴⁰³ But Congress should take further steps in the direction of individual choice in veterans' health care. Ultimately, veterans' health facilities should be privatized, and all veterans should receive vouchers to access care at private facilities of their choice. ⁴⁰⁴

Government as Purchaser

The main focus of this study has been activities that the federal government should get out of completely, such as the electric power business. There are other activities that the government will continue to fund but could be partly privatized, such as veterans' health care. The Office of Management and Budget (OMB) found that about 850,000 federal workers have been "identified as performing commercial activities."405 Generally, such activities can be purchased from contractors, and OMB Circular A-76 describes a process to determine when that makes economic sense. 406 The Clinton and Bush administrations, as noted, successfully privatized 187,000 units of military housing. That initiative improved housing quality, reduced housing costs about 10 percent, and cut energy use. 407 The next president should expand such efforts.

Government as Seller

The federal government not only purchases products from the private sector, it also sells them to the private sector. But that often

puts the government in competition with private firms. 408 The USPS, for example, delivers packages in competition with FedEx and UPS. The government sells many other products as well, including maps, pest eradication services, and laboratory work. 409 Allowing the government to sell items that the private sector can or does sell makes no sense. Congress should privatize such activities, and bar federal agencies from entering activities that private businesses perform.

Further Reforms

This study has described an array of federal businesses and assets that should be privatized. But there are many others. The government should sell financial assets and businesses, such as its portfolio of student loans and the mortgage giants Fannie Mae and Freddie Mac. It should sell some of the 260 million ounces of gold that it holds at Fort Knox and elsewhere. ⁴¹⁰ At a price of about \$1,200 an ounce, the gold stockpile is worth more than \$300 billion.

The government should sell its stockpile of about 700 million barrels of crude oil in the Strategic Petroleum Reserve (SPR).⁴¹¹ Our oil security rests on market forces and a diversity of supplies in the global economy, not the SPR.⁴¹² At about \$40 a barrel, the SPR is worth roughly \$28 billion. Taxpayers would also save annual SPR operating costs of more than \$200 million.

Congress should also remove federal barriers to state and local privatization. State and local governments own highways, bridges, seaports, airports, and other infrastructure. Much of that infrastructure can be financed, built, and operated by the private sector. It can be fully privatized in some cases, or partly privatized through public-private partnerships.⁴¹³ Such partnerships shift elements of building, financing, management, operations, and project risks to the private sector.

The United States lags countries such as Australia, the United Kingdom, and Canada on infrastructure privatization and public-private partnerships. One reason is that the federal income tax exemption for state and local bond interest allows governments to finance infra-

structure at a lower cost than private businesses can. Congress should repeal this tax break and level the playing field between government and private infrastructure projects.

Federal spending subsidies also stack the deck against state and local privatization. The federal government provides grants for government-owned airports and urban transit but not private airports and urban transit. Those federal subsidies should be repealed. Also, federal rules that require state and local governments to repay past aid if facilities are privatized should be repealed. Politicians love to tout the economic benefits of public infrastructure, but if they leveled the playing field, the private sector would provide much more of it.

CONCLUSIONS

A study by Jonathan Karpoff provided a unique comparison between government and private enterprise. He looked at 92 missions of discovery to the Arctic and the North Pole during the 19th century, some of which were private and some government.414 Karpoff found that the private missions, on average, performed substantially better than the government ones, even though the latter were better funded. Private missions made more discoveries, and they lost fewer expedition members and ships. The study illustrated the importance of institutional structures on incentives. Unlike governments, private entrepreneurs face strong incentives to generate value, pursue innovations, and achieve their stated goals.

Margaret Thatcher believed that the 20th-century takeover of industries by governments was a mistake and that decentralized efforts by private businesses are superior to state efforts. The results of three decades of privatization around the world have proven her right. Thousands of government businesses have been privatized, and very few have been renationalized. The revolution begun by Thatcher has been sustained because leaders of all political stripes have recognized that privatization simply works.

Privatization increases economic efficiency, spurs entrepreneurship, creates greater

transparency, and benefits the environment. Private-sector organizations make many mistakes, but they are also constantly fixing them. They have to innovate to keep up with the changing needs of society. By contrast, federal organizations, such as Amtrak, the USPS, and the FAA, follow failed and obsolete approaches decade after decade.

The next president should work with Congress to line up the best candidates for privatization, explain the benefits of reform to the public, and move ahead with legislation. With many activities, such as postal services and air traffic control, we can look to the extensive experience from abroad about how to structure reforms.

It is true that reforms would face political hurdles, as interest groups defended the status quo. A British expert noted that "nearly every U.K. privatization was a struggle."⁴¹⁵ But the world is always changing, and that creates fresh opportunities for reform-minded leaders. Margaret Thatcher dared not privatize the Royal Mail, but current Prime Minister David Cameron recently did so because it had become clear that a snail-mail monopoly has no place in an email world.

America is still the dominant economy in the world, but the privatization revolution shows that we have a lot to learn about economic reforms from abroad. In many countries, politicians have let entrepreneurs take a crack at long-sheltered government fiefdoms. American leaders should show the same boldness and let entrepreneurs replace federal bureaucracies wherever they can.

NOTES

1. Worldwide privatization proceeds between 1988 and August 2015 were \$3.26 trillion. See William L. Megginson, "Privatization Trends and Major Deals in 2014 and Two-Thirds 2015," in "The PB Report 2014/2015," Privatization Barometer, www.privatizationbarometer.net. This amount does not include the privatizations done through distribution of free vouchers, which was common in Eastern Europe in the 1990s.

Congress should also remove federal barriers to state and local privatization.

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- 3. The word *privatization* was used occasionally in the mid-20th century, but it was Thatcher's government that popularized it. See Germa Bel, "The Coining of 'Privatization' and Germany's National Socialist Party," Journal of Economic Perspectives 20, no. 3 (Summer 2006): 187–94. Initially, Thatcher did not like the word privatization, but other terms had shortcomings as well, and so she began using it publicly in 1981. See Charles Moore, Margaret Thatcher: At Her Zenith in London, Washington and Moscow (New York: Alfred Knopf, 2016), pp. 34, 39. Meanwhile, in the United States, economist Steve Hanke was helping popularize the word. See Dan Balz, "Once Riding High, Sagebrush Rebels Turn in Midstream," Washington Post, April 10, 1982.
- 4. Organisation for Economic Co-operation and Development (OECD), *Privatising State-Owned Enterprises* (Paris: OECD, 2003), p. 21.
- 5. Chris Aulich and Janine L. O'Flynn, "From Public to Private: The Australian Experience of Privatisation," *Asia Pacific Journal of Public Administration* 29, no. 2 (December 2007): 161. About \$160 billion in federal and state privatization in Australian dollars is more than \$100 billion in U.S. dollars.
- 6. William L. Megginson, *The Financial Economics of Privatization* (Oxford, U.K.: Oxford University Press, 2005), p. 17.
- 7. Dieter Brauninger, "Privatisation in the Euro Area: Differing Attitudes towards Public Assets," Research Briefing, Deutsche Bank, August 20, 2013, p. 4. See also Dieter Brauninger, "Privatisation in the Euro Area: Governments Should Grasp Opportunities," Research Briefing, Deutsche Bank, July 31, 2015, p. 5.
- 8. Alberto Chong and Florencio López-de-Silanes, "Privatization in Mexico," Inter-American Development Bank, August 2004, p. 8.

- 9. Julia Borrmann et al., "The Privatisation Goldmine," New Direction Foundation (Brussels), June 2013, p. 18.
- 10. The Labour government in the United Kingdom, the Liberal government in Canada, the Socialist government in France, the Labour government in New Zealand, and the Labor government in Australia all privatized.
- 11. Megginson, *The Financial Economics of Privatization*, p. 4.
- 12. Ibid.
- 13. William L. Megginson, "Privatization and Finance," *Annual Review of Financial Economics* 2 (December 2010): 145–74.
- 14. Worldwide privatization proceeds between 1988 and August 2015 were \$3.26 trillion. See Megginson, "Privatization Trends."
- 15. The privatized Royal Mail delivers letters and packages. The government retained what is now called the Post Office, which is a retail chain providing postal and other services.
- 16. OECD, Privatising State-Owned Enterprises," p. 9.
- 17. William L. Megginson and Jeffry M. Netter, "From State to Market: A Survey of Empirical Studies on Privatization," *Journal of Economic Literature* 39, no. 2 (June 2001): 25.
- 18. Robert Poole, "Ronald Reagan and the Privatization Revolution," Reason Foundation, June 8, 2004.
- 19. The USEC sold uranium to nuclear utilities. The company filed for bankruptcy protection in 2014 in the wake of falling demand. It was restructured and adopted the name Centrus Energy. Intelsat was owned by a consortium of countries and was privatized by the Orbit Act of 2000.
- 20. Thatcher began using the word *privatization* publicly in 1981. See Moore, *Margaret Thatcher: At*

Her Zenith, pp. 34, 39.

- 21. U.K. Department for Communities and Local Government, *English Housing Survey: Headline Report 2014–2015* (London: U.K. Government, February 2016), Annex Table 1.1. A *Guardian* story said the drop was from 42 percent to 8 percent: John Harris, "The End of Council Housing," *The Guardian*, January 4, 2016.
- 22. Margaret Thatcher, *The Downing Street Years* (New York: HarperCollins, 1993), p. 676.
- 23. Ibid.
- 24. Mark Milke, "The Iron Lady for a New Generation: Why Margaret Thatcher Mattered," Fraser Forum, Fraser Institute, March/April 2012. Walters was in close contact with the Canadian Fraser Institute and was familiar with the institute's book: Theodore M. Ohashi and T. P. Roth, eds., Privatization: Theory and Practice (Vancouver, British Columbia: The Fraser Institute, 1980). The book described privatization of the British Columbia Resources Investment Corporation, which was the largest Canadian share offering to that date.
- 25. Ohashi and Roth, *Privatization: Theory and Practice*.
- 26. For a discussion of privatization methods, see Organisation for Economic Co-operation and Development, *Privatisation in the 21st Century: Recent Experiences of OECD Countries* (Paris: OECD, 2009).
- 27. Thatcher, The Downing Street Years, p. 680.
- 28. Megginson, *The Financial Economics of Privatization*, p. 15.
- 29. OECD, Privatising State-Owned Enterprises, p. 24.
- 30. Moore, Margaret Thatcher: At Her Zenith, p. 211.
- 31. However, there was tension in some privatizations, such as with British Gas, between increasing industry competition and maximizing the sale value

by privatizing companies as a single unit rather than splitting them up.

- 32. For example, see David Parker, "The UK's Privatisation Experiment," CESifo (Munich) Working Paper no. 1126, February 2004, p. 12.
- 33. Ibid., p. 22.
- 34. The table is based on various sources. One good source is Chris Rhodes, David Hough, and Louise Butcher, "Privatisation," Research Paper 14/61, British House of Commons Library, November 20, 2014. Another is Megginson, *The Financial Economics of Privatization*, app. 1.
- 35. Peter Lloyd and Anne-Mari Nevala, *The Employment Impact of the Opening of Electricity and Gas Markets* (Brussels: European Commission, March 2007), p. 14. See also Parker, "The UK's Privatisation Experiment," p. 12. Parker cites a smaller employment drop for gas.
- 36. Ryan Bourne and Tim Knox, "What Did Privatisation Do for Us?" Centre for Policy Studies Growth Bulletin no. 28, April 11, 2013. See also Stuart Holder, National Economic Research Associates, "Privatisation and Competition: The Evidence from Utility and Infrastructure Privatisation in the UK" (paper presented at 12th plenary session of OECD Advisory Group on Privatisation, Helsinki, September 1998).
- 37. Moore, Margaret Thatcher: At Her Zenith, p. 39.
- 38. Her Majesty's Treasury, *Implementing Privatisation: The UK Experience* (London: HM Treasury, 1997), table 4.
- 39. Parker, "The U.K.'s Privatisation Experiment," pp. 15, 16, 41.
- 40. David M. Newbery and Michael G. Pollitt, "The Restructuring and Privatization of the U.K. Electricity Supply—Was It Worth It?" World Bank Viewpoint Note no. 124, September 1997.
- 41. Her Majesty's Treasury, Implementing Privati-

sation, p. 14.

- 42. Parker, "The U.K.'s Privatisation Experiment," p. 16.
- 43. Holder, "Privatisation and Competition," p. 20.
- 44. John Blundell, "The Miracle of Privatization," *The Freeman*, September 1, 2000. See also Daniel Yergin and Joseph Stanislaw, *The Commanding Heights* (New York: Free Press, 1998), p. 101.
- 45. Bourne and Knox, "What Did Privatisation Do for Us?"
- 46. Yergin and Stanislaw, Commanding Heights, p. 97.
- 47. Emma Simon, "Thatcher's Legacy: How Has Privatisation Fared?" *Telegraph*, April 12, 2013. See also Her Majesty's Treasury, *Implementing Privatization*, p. 20.
- 48. Parker, "The U.K.'s Privatisation Experiment," p. 42.
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- 50. For a detailed examination, see John Hibbs et al., *The Railways, the Market and the Government* (London: Institute of Economic Affairs, 2006).
- 51. For example, see Richard Wellings, "The Privatisation of the U.K. Railway Industry," *Economic Affairs* 34, no. 2 (June 2014): 255–66. See also the discussion in Hibbs et al., *The Railways*.
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- 55. See historical data in Joseph Vranich, *End of the Line: The Failure of Amtrak Reform and the Future of America's Passenger Trains* (Washington: American Enterprise Institute, 2004), p. 144.
- 56. Rico Merkert and Chris Nash, "The Restructuring of the Rail System in Britain," in Hibbs et al., *The Railways*, pp. 81, 82. More recent data are at www.networkrail.co.uk/about/performance.
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- 61. U.K. National Audit Office, *The Economic Regulation of the Water Sector* (London: National Audit Office, October 14, 2015), p. 7.
- 62. Ofwat, *The Development of the Water Industry in England and Wales* (Birmingham, U.K.: Office of Water Services, January 2006). See also George Day, "An Insider's View of U.K. Privatization," *Global Water Intelligence* 3, no. 1 (January 2012); U.K. National Audit Office, *The Economic Regulation of the Water Sector*, p. 23; and Ofwat, "Leakage," www. ofwat.gov.uk/households/supply-and-standards/leakage.
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69. Ibid., abstract.

70. Anthony E. Boardman and Aidan R. Vining, "A Review and Assessment of Privatization in Canada," School of Public Policy, University of Calgary, January 2012, summary.

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72. John Nellis, "The International Experience with Privatization: Its Rapid Rise, Partial Fall, and Uncertain Future," School of Public Policy, University of Calgary, Alberta, Canada, January 2012, p. 13.

73. John Nellis, "Privatization: A Summary Assessment," Center for Global Development Working Paper no. 87, March 2006, abstract.

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75. Ibid., p. 48.

76. Megginson, *The Financial Economics of Privatization*, p. 52.

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80. Ibid., p. 21.

81. Andrei Shleifer, "State versus Private Ownership," *Journal of Economic Perspectives* 12, no. 4 (Autumn 1998): 135.

82. Organisation for Economic Co-operation and Development, *Privatisation in the 21st Century: Recent Experiences of OECD Countries* (Brussels: OECD, January 2009), p. 52.

83. Sunita Kikeri, "Privatization and Labor: What Happens to Workers When Governments Divest?" World Bank Technical Paper no. 396, 1997, p. 3.

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- 101. Vranich, End of the Line, p. 5.
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- 104. David R. Myddelton, "The British Approach to Privatisation," *Economic Affairs* 34, no. 2 (June 2014): 134.
- 105. Thatcher, The Downing Street Years, p. 685.
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- 107. Moore, Margaret Thatcher: At Her Zenith, pp. 199, 201.
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- also George Day, "An Insider's View of U.K. Privatization," *Global Water Intelligence* 3, no. 1 (January 2012); and U.K. National Audit Office, *The Economic Regulation of the Water Sector*.
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- 140. The business is part of General Dynamics' Ordnance and Tactical Systems (Canada) group. See

General Dynamics Corporation, www.gd-otscana da.com/about-us.

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June 2014). See also John Palatiello, *Annual Privatization Report: Federal Government Privatization*, ed. Leonard Gilroy (Los Angeles, CA: Reason Foundation, May 2015).

410. Department of the Treasury, "Status Report of U.S. Government Gold Reserve," December 31, 2015, www.fiscal.treasury.gov/fsreports/rpt/gold Rpt/15-12.htm.

411. The SPR inventory is listed at www.spr.doe .gov/dir/dir.html.

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