The Opportunity Costs of Socialism

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Executive Summary

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Coincident with the 200th anniversary of Karl Marx's birth, socialism is making a comeback in American political discourse. Detailed policy proposals from self-declared socialists are gaining support in Congress and among much of the electorate.

It is unclear, of course, exactly what a typical voter has in mind when he or she thinks of "socialism." But economists generally agree about how to define socialism, and they have devoted enormous time and resources to studying its costs and benefits. With an eye on this broad body of literature, this report discusses socialism's historic visions and intents, its economic features, its impact on economic performance, and its relationship with recent policy proposals in the United States.

We find that historical proponents of socialist policies and those in the contemporary United States share some of their visions and intents. They both characterize the distribution of income in market economies as the unjust result of "exploitation," which should be rectified by extensive state control. The proposed solutions include single-payer systems, high tax rates ("from each according to his ability"), and public policies that hand out much of the Nation's goods and services "free" of charge ("to each according to his needs"). Where they differ is that contemporary democratic socialists denounce state brutality and would allow individuals to privately own the means of production in many industries.

In assessing the effects of socialist policies, it is important to recognize that they provide little material incentive for production and innovation and, by distributing goods and services for "free," prevent prices from revealing economically important information about costs and consumer needs and wants. To this end, as the then–prime minister of the United Kingdom, Margaret Thatcher (1976), once argued, "Socialist governments . . . always run out of other people's money," and thus the way to prosperity is for the state to give "the people more choice to spend their own money in their own way."

Whether socialism delivers on its appealing promises is an empirical question. We begin our investigation by looking closely at the most highly socialist cases, which are typically agricultural economies, such as Maoist China, Cuba, and the Union of Soviet Socialist Republics (USSR). Their nondemocratic governments seized control of farming, promising to make food more abundant. The result was substantially less food production and tens of millions of deaths by starvation. Even if highly socialist policies are peacefully implemented under the auspices of democracy, the fundamental incentive distortions and information problems created by large state organizations and the centralized control of resources are also present in industrialized countries, as is currently the case in Venezuela. Lessons from poorly performing agricultural economies under socialist regimes carry over to government takeovers of other modern industries: They produce less rather than more.

These countries are examples of a more general pattern of socialism's negative output effects. Such outcomes have also been observed in cross-country studies of the effect of greater economic freedom—quantified as an index of taxation and public spending, the extent of state-owned enterprises, economic regulation, and other factors—on real gross domestic product (GDP). This literature finds a strong association between greater economic freedom and better economic performance. It suggests that replacing U.S. policies with highly socialist policies, such as Venezuela's, would reduce real GDP at least 40 percent in the long run, or about $24,000 per year for the average person.

Although they are sometimes cited as more relevant socialist success stories, the experiences of the Nordic countries also support the conclusion that socialism reduces living standards. In many respects, the Nordic countries' policies now differ significantly from what economists have in mind when they think of socialism. For instance, they do not provide healthcare for "free"; Nordic healthcare financing includes substantial cost sharing. Marginal labor income tax rates in the Nordic countries today are only somewhat higher than in the United States, and Nordic taxation overall is surprisingly less progressive than U.S. taxes. The Nordic countries also tax capital income less and regulate product markets less than the United States does. However, the Nordic countries do regulate and tax labor markets somewhat more; thus, American families earning the average wage would be taxed $2,000 to $5,000 more per year net of transfers if the United States had current Nordic policies. Living standards in the Nordic countries are at least 15 percent lower than in the United States.

It may well be that American socialists are envisioning moving our policies to align with those of the Nordic countries in the 1970s, when their policies were more in line with economists' traditional definition of socialism. We estimate that if the United States were to adopt these policies, its real GDP would decline by at least 19 percent in the long run, or about $11,000 per year for the average person.

The Nordic and European versions of socialized medicine have been viewed as so desirable by modern U.S. socialists that they have proposed nationalizing payments for the healthcare sector (which makes up more than a sixth of the U.S. economy) through the recent "Medicare for All" proposal. This policy would distribute healthcare for "free" (i.e., without cost sharing) through a monopoly government health insurer that would centrally set all prices paid to suppliers such as doctors and hospitals. We find that if this policy were financed out of current Federal spending without borrowing or tax increases, then more than half the entire existing Federal budget would need to be cut. Or if it were financed through higher taxes, GDP would fall by 9 percent, or about $7,000 per person in 2022, due to high tax rates that would reduce incentives to supply the factors of production. Evidence on the productivity and effectiveness of single-payer systems suggests that “Medicare for All” would reduce both short- and long-run longevity and health despite increasing somewhat the population with health insurance.

Introduction

Coincident with the 200th anniversary of Karl Marx's birth, socialism is making a comeback in American political discourse. Detailed policy proposals from self-declared socialists are gaining support in Congress and among much of the younger electorate. The purpose of this report is to evaluate the claims of modern U.S. socialists from the perspective of economists who have extensively studied the costs and benefits of socialism. We examine socialism's historical and modern vision and intent, its economic incentives, its impact around the world on economic performance, and its relationship with recent policy proposals in the U.S.

To economists, socialism is not a zero-one designation. Whether a country or industry is socialist is a question of the degree to which (a) the means of production, distribution, and exchange are owned or regulated by the state; and (b) the state uses its control to distribute the economic output without regard for final consumers' willingness to pay or exchange (i.e., giving resources away "for free").[1] As explained below, this definition conforms with both statements and policy proposals from leading socialists, ranging from Karl Marx to Vladimir Lenin to Mao Zedong to current American socialists.[2]

In modern models of capitalist economies, there is, of course, an ample role for government. In particular, there are public goods and goods with externalities that will be inefficiently supplied by the free market. Public goods are undersupplied in a completely free market because there is a free rider problem. For example, if national defense, a public good enjoyed by the whole country, were sold at local supermarkets, few would contribute because they would feel their individual purchase would not matter and they would prefer others to contribute while still being defended. Consequently, the market would not provide sufficient

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[1] Criterion a is from the *Oxford English Dictionary*, which defines socialism as public policy based on "a political and economic theory of social organization which advocates that the means of production, distribution, and exchange should be owned or regulated by the community as a whole." Criterion b further focuses the discussion to rule out state ownership or regulation for other purposes, such as fighting a war. See also Samuelson and Nordhaus (1989, 833), who describe "democratic socialist governments [that] expanded the welfare state, nationalized industries, and planned the economy."

[2] For classical socialists, "communism" is a purely theoretical concept that has never yet been put into practice, which is why the second "S" in USSR stands for "Socialist." Communism is, in their view, a social arrangement where there is neither a state nor private property; the abolition of property is not sufficient for communism. As Lenin explained, "The goal of socialism is communism." The supposed purpose of the "Great Leap Forward" was for China to transition from socialism to communism before the USSR did (Dikötter 2010). The classical definition therefore stands in contrast to vernacular usage of communism to refer to historical instances of socialism where the degree of control was the highest, such as the USSR, Cuba, North Korea, or Maoist China. This report therefore avoids the term "communism."

defense. However, socialist regimes go well beyond government intervention into markets with public goods or externalities.

This is an empirical report about socialism that takes as its benchmark current U.S. public policies. This benchmark has the advantage of being measureable, but it necessarily differs from theoretical concepts of "capitalism" or "free markets" because the U.S. government may not limit its activity to theoretically defined public goods. Relative to the U.S. benchmark, we find that socialist public policies, though ostensibly well-intentioned, have clear opportunity costs that are directly related to the degree to which they tax and regulate.

We begin our investigation by looking closely at the most extreme, although not uncommon, socialist cases, which are Maoist China, Cuba, the USSR, and other primarily agricultural countries (Pipes 2003). Referring to these same countries, Janos Kornai (1992, xxi) explained that the "development and the break-up and decline of the socialist system amount to the most important political and economic phenomena of the twentieth century. At the height of this system's power and extent, a third of humanity lived under it."

Socialists in these countries accused the agriculture sector of being unfair and unproductive (equivalently, food was too expensive in terms of the labor required to produce it) because farmers, who had been working on their land for generations, were too unsophisticated and because the market failed to achieve economies of scale. Government takeovers of agriculture, which forcibly converted private farms into state farms directed by government employees and party apparatchiks, were advertised as the way that socialist countries would produce more food with fewer workers so resources could be shifted into other industries.

Although agriculture is not a large share of the U.S. economy, present-day socialists echo the historical socialists by arguing that healthcare, education, and other sectors are unfair and unproductive, and they promise that large state organizations will deliver fairness and economies of scale. It is therefore worth acknowledging that socialist takeovers of agriculture have delivered the opposite of what was promised.[3] Food production plummeted and tens of millions of people died from starvation in the USSR, China, North Korea, and other agricultural economies where the state took command.

Present-day socialists do not want the dictatorship or state brutality that often coincided with the most extreme cases of socialism. However, peaceful democratic implementation of socialist policies does not eliminate the fundamental incentive and information problems created by high tax rates, large state organizations, and the centralized control of resources. Venezuela is a modern industrialized country that elected Hugo Chávez as its leader to

[3] Many socialist scholars concur on this point (Nolan 1988, 6; Roemer 1995, 23–24; Nove 2010).

implement socialist policies, and the result was less output in oil and other industries that were nationalized. In other words, the lessons from socialized agriculture carry over to government takeovers of oil, health insurance, and other modern industries: They produce less rather than more, even in today's information age, where central planning is possibly easier.

Proponents of socialism acknowledge that the experiences of the USSR and other highly socialist countries are not worth repeating, but they continue to advocate for increased taxation and state control in order to help low-income people. Such policies would also have negative output effects, albeit of a lesser magnitude, as is seen in cross-country studies of the effect on real GDP of greater economic freedom. A broad body of academic literature quantifies the extent of economic freedom in several dimensions, including taxation and spending, the extent of state-owned enterprises, economic regulation, and other factors. This literature finds a strong association between greater economic freedom and better economic performance, suggesting that replacing U.S. policies with highly socialist policies such as Venezuela's would reduce real GDP more than 40 percent in the long run, or about $24,000 per year for the average person.

Despite this evidence, current socialists sometimes cite the Nordic countries as socialist success stories. However, in many respects, the Nordic countries' policies now differ significantly from policies economists view as characteristic of socialism. Nordic healthcare is not free but rather requires substantial cost sharing. As compared with the U.S. rates at present, marginal labor income tax rates in the Nordic countries today are only somewhat greater, and Nordic taxation overall is surprisingly less progressive than U.S. taxes. The Nordic countries also tax capital income less and regulate product markets less than the United States does, but regulate labor markets more. Living standards in the Nordic countries are at least 15 percent lower than in the United States.

The Nordic and European versions of socialized medicine have been viewed as so desirable by modern U.S. socialists that they have proposed nationalizing payments for healthcare—which makes up more than a sixth of the U.S. economy—through the recent "Medicare for All" proposal. This proposal would create a monopoly government health insurer to provide healthcare for "free" (i.e., without cost sharing) and to centrally set all prices paid to suppliers such as doctors and hospitals. We find that if this policy were financed out of current Federal spending without borrowing or tax increases, then more than half the entire existing Federal budget would need to be cut. If it were financed through higher taxes, GDP would fall by 9 percent, or about $7,000 per person in 2022. Evidence on the productivity and effectiveness of single-payer systems suggests that "Medicare for All" would reduce longevity and health, particularly among the elderly, even though it would only slightly increase the fraction of the population with health insurance.

The burden is on socialists to explain how their latest policy agenda would overcome the undeniable problems observed when socialism was tried in the past. As the sociology professor Paul Starr put it, "Much of [modern American socialists'] platform ignores the economic realities that European socialists long ago accepted."[4] Marx's 200th birthday is a good time to gather and review the overwhelming evidence.[5]

The next section of this report begins by briefly reviewing the historical and modern socialist interpretations of market economies and some of the challenges with socialist policy proposals. The third section reviews the evidence from the highly socialist countries, by which we mean countries that were implementing the most state control of production and incomes. Highly socialist countries experienced sharp declines in output, especially in the industries that were taken over by the state. Economies with less extreme socialism also generate less output, although the shortfall is not as drastic as with the highly-socialist countries, as shown in the fourth section for a wide cross section of countries. The fifth section's more detailed examination of the Nordic countries reports a similar result. The sixth section applies the economic analysis to the headline American socialist proposal, "Medicare for All."

The Economics of Socialism

Historically, philosophers and even some well-regarded economists have offered socialist theories of the causes of income and wealth inequality, and they have advocated for state solutions that are commonly echoed by modern socialists. They both argue that there is "exploitation" in the market sector and there are virtually unlimited economies of scale in the public sector. The solutions include single-payer systems, high tax rates ("from each according to his ability"), and public policies that hand out much of the Nation's goods and services free of charge ("to each according to his needs") (Marx 1875).

The Socialist Economic Narrative: Exploitation Corrected by Central Planning

When Marx was writing over 150 years ago, obviously exploitive practices were still familiar. The modern socialist view is that exploitation remains real but is somewhat hidden in the market for labor. Much inequality arises, it is said, because market activity is a zero-sum game, with owners and workers paid according to the power they possess (or lack), rather than their marginal products. From the workers' perspective, profits are an unnecessary cost in the production process. As Karl Marx put it, "Modern bourgeois private property is the final and

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[4] Starr (2016) was referring specifically to Vermont senator Bernie Sanders, who is the leading socialist in Federal politics today.

[5] See also Acemoglu and Robinson (2015), who review Marx's key predictions about trends for wages and profits and find them to be falsified by the evidence.

most complete expression of the system of producing and appropriating products, that is based on class antagonisms, on the exploitation of the many by the few" (Marx and Engels 1848, 24). The Chinese leader Mao Zedong, who cited Marxism as the model for his country, described "the ruthless economic exploitation and political oppression of the peasants by the landlord class" (Cotterell 2011, chap. 6). Expressing similar concerns, current American senators Bernie Sanders and Elizabeth Warren have stated that "large corporations . . . exploit human misery and insecurity, and turn them into huge profits" and "giant corporations . . . exploit workers just to boost their own profits."[6]

The French economist Thomas Piketty, whose 2014 book *Capital in the 21st Century* recalls Marx's *Das Kapital*, asserts that inequality today is "terrifying" and that public policy can and must reduce it; wealth holders must be heavily taxed.[7]

The socialist narrative names the oppressors of the vulnerable, such as the bourgeoisie (Marx), kulaks (Lenin), landlords (Mao), and giant corporations (Sanders and Warren).[8] Piketty (2014) concludes that the Soviet approach and other attempts to "abolish private ownership" should at least be admired for being "more logically consistent."

Historical and contemporary socialists argue that heavy taxation need not reduce national output because a public enterprise uses its efficiency and bargaining power to achieve better outcomes. Mao touted the "superiority of large cooperatives." He decreed that the Chinese government would be the single payer for grain, prohibiting farmers from selling their grain to any other person or business (Dikötter 2010).[9] In describing China, the British economists Joan Robinson and Solomon Adler (1958, 3) celebrated that "the agricultural producers' cooperatives have finally put an end to the minute fragmentation of the land." Lenin stressed

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[6] Quotations from Senator Sanders (https://www.theguardian.com/us-news/2017/aug/03/nissan-workers-union-bernie-sanders) and Senator Warren (https://www.safetyandhealthmagazine.com/articles/17144-sen-elizabeth-warren-praises-power-of-regulation-during-symposium-speech), respectively. See also Bernhardt et al. (2008), and Section 103 of the House "Medicare for All" bill (H.R. 676), which requires health providers to surrender their for-profit status.

[7] Thomas Piketty (2014, 572, 518) writes that "the right solution is a progressive annual tax on capital," and "the primary purpose of the capital tax is not to finance the social state but to regulate capitalism."

[8] "Speculators" are also blamed for high prices and other social problems, as by Marx, Stalin, Senator Sanders, Senator Warren, and Fidel Castro, who said that they "have turned the planet into a giant casino" (Marx (1867/1887, chap. 8), https://www.marxists.org/reference/archive/stalin/works/1928/01/x01.htm, https://www.sanders.senate.gov/newsroom/press-releases/statement-by-sen-bernie-sanders-on-wall-streets-impact-on-oil-prices, https://www.washingtonpost.com/opinions/elizabeth-warren-is-on-the-hunt-again/2015/09/30/0e21163a-67be-11e5-8325-a42b5a459b1e_story.html, , http://news.bbc.co.uk/2/hi/americas/246491.stm).

[9] Lenin (1918) also enforced a grain monopoly in the USSR.

transforming "agriculture from small, backward, individual farming to large-scale, advanced, collective agriculture, to joint cultivation of the land." Proponents of socialism in America today argue that the Federal government can run healthcare more efficiently than many competing private enterprises.[10]

State ownership of the means of production is an often-repeated Marxist proposal for ending worker exploitation by leveraging scale economies. This aspect of socialism is less visible in modern American socialism, because in most instances, socialists would allow individuals to be the legal owners of capital and their own labor.[11] However, the economic significance of ownership is control over the use of an asset and of the income it generates, rather than the legal title by itself. In other words, the economic value of ownership is sharply diminished if the legal owner has little control and little of the income.[12] The concept of full ownership in the economic sense is rejected by socialists; they maintain that private owners left to themselves would not achieve full economies of scale and would continue exploiting workers. Public monopolies, "public options," profit prohibitions, and the regulatory apparatus allow the socialist state to control asset use, and high tax rates allow the state to determine how much income everyone receives, without necessarily abolishing ownership in the narrow legal sense.

Historical socialists such as Lenin, Mao, and Castro ran their countries without democracy and civil liberties. Modern democratic socialists are different in these important ways. Nevertheless, even when socialist policies are peacefully implemented under the auspices of democracy, economics has a lot to say about their effects.

Whose Money Is Spent on Whom

Any productive economic system needs incentives: means of motivating effort, useful application of knowledge, and the creation and maintenance of productive assets. The higher an economy's tax rates, the more its industries are monopolized by a public enterprise, and the more its goods and services are distributed free of charge, then the more disincentives will reduce the value created in the economy.

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[10] The CEA notes that it is directed by the 1946 Employment Act to "formulate and recommend national economic policy to promote employment, production, and purchasing power under free competitive enterprise" (Sec. 4a).

[11] Even the USSR and other highly socialist countries had elements of private property (Dolot 2011, 134; see also Pryor 1992, chap. 4). The CEA also notes that American socialists may not only intend to prohibit private health insurance but also, for example, intend to nationalize energy companies (Day 2018).

[12] See also Samuelson and Nordhaus (1989, 837) who define a socialist economy as one "in which the major economic decisions are made administratively, without profits as a central motive force for production," and Roemer (1994), who defines socialism independent of legal property rights.

As the Nobel Prize–winning economist Milton Friedman demonstrated with his illustration of "four ways to spend money" (see figure 1), a challenge for socialism is that the persons deciding on resource allocations—that is, how much to spend on a product and how that product should be manufactured and delivered to the final consumer—are different from those providing the resources and different from the final consumer who is ultimately using them (Friedman and Friedman 1980). In the market system, people spend their own money, and are therefore more careful how much to spend and on what the money is spent. To the extent that they also use what they purchased—the upper left corner in figure 1—they are also more discerning, so that the items purchased are of good value. They will gather and consider information that helps compare the value of different options.

Figure 1. Four Ways to Spend Money

		On whom money is spent	
		Yourself	Someone else
Whose money is spent	Yours	Economize and seek highest value	Economize, but don't seek highest value
	Someone else's	Don't economize but seek highest value	Don't economize and don't seek highest value

The upper right hand corner of figure 1 gives the case of spending one's own money on someone else, which introduces inefficiencies because the recipient may place a lower value on the spending. For example, the recipients of Christmas gifts sometimes value the gifts less than they cost the giver, as exemplified by Christmas sweaters that are never taken out of the closet to be worn. The inefficiency of the lower left corner is exemplified by the larger spending that takes place when spending on oneself using other people's money, as with fully reimbursed corporate travel or entertainment. The lower right category is the one applicable to government employees who spend tax revenue on government program beneficiaries; not only is there a tendency to overspend using other people's money, but that spending may have little value from the perspective of program beneficiaries.[13]

Many presentations of socialist policy options, even those by expert economists, ignore the distinction between spending your money on yourself and spending someone else's money on someone else. The "Medicare for All" bills currently in Congress, for example, supposedly just

[13] The gap between program spending and value to beneficiaries has been measured by Gallen (2015), Finkelstein and McKnight (2008), and Olsen (2008), among others.

swap household expenditures on health insurance that occur under a private system for household expenditures on taxes earmarked for the public program.[14] But this swap fundamentally changes the types of healthcare that are ultimately received by consumers, the size of the healthcare budget, and the size of the overall economy. In a private system, a consumer has some control over his or her spending on health insurance—by, for example, selecting a plan with different benefits, or switching to a more efficient provider. Insurers in a private system must be responsive to consumer demands if they want to attract and retain customers and thus stay in business.[15] Individuals also have little reason to economize on anything that they can obtain without payment (Arrow 1963; Pauly 1968).

In a socialist system, the state decides the amount to be spent, how it is spent, and when and where the services are received by the consumer. A consumer who is unhappy with the state's choices has little recourse, especially if private businesses are prohibited from competing with the state (as they are under "Medicare for All"). It may be argued that "giant" private corporations also limit consumer choice, but this comparison ignores how corporations are subject to competition. For example, a consumer can purchase goods from Walmart rather than Amazon, not to mention a whole host of other retailers. Amazon is legally permitted to entice Walmart customers, and vice versa, with low prices, better products, free shipping, and so on. Whereas retail customers are not forced to open their wallets, giant state enterprises are guaranteed revenue through taxation and are often legally protected from competition.[16] Those who maintain that Amazon and Walmart are too large might note that the single-payer revenues proposed in "Medicare for All" will be about eight times the revenue for either of these corporations.[17]

Another problem with the socialist system is that "other people's money" starts to disappear when the "other people" realize that they have little incentive to earn and innovate because what they receive has little to do with how much they make.[18] An important reason that people

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[14] Cooper (2018) refers to it as the "taxes-for-premiums swap." Krugman (2017), writes that "most people would gain more from the elimination of insurance premiums than they would lose from the tax hike" without mentioning any of the economic problems with spending someone else's money on someone else.

[15] See also Shleifer (1998).

[16] Interestingly, socialist policies could simultaneously reduce the size of private enterprises with antitrust and other policies and enlarge government enterprises with legal protections from competition.

[17] The sixth section of this report estimates that "Medicare for All" would be financed with about $2.4 trillion in 2022. In 2017, Walmart's U.S. revenues were about $0.3 trillion, while Amazon's U.S. revenues were less than $0.2 trillion. The sixth section also explains why "Medicare for All" would sharply reduce consumer spending, which suggests that 2017 revenues would be an optimistic projection for what retail corporations would earn with "Medicare for All" in place.

[18] See also Winston (2010) for an analysis of the private sector's innovation advantage.

work and put forth effort is to obtain goods and services that they want. Under socialism, the things they want may be unavailable because the market no longer exists, or are made available without the need for working.

Noneconomists sometimes claim that high taxes do not prevent anyone from working, as long as the tax rate is less than 100 percent, because everyone strives to have more income rather than less. This "income maximization" hypothesis is contradicted by the most basic labor market observations, not to mention decades of research.[19] Earning additional income requires sacrifices (a loss of free time, relocating to an area with better-paying jobs, training, taking an inconvenient schedule, etc.), and people evaluate whether the net income earned is enough to justify the sacrifices. Socialism's high tax rates fundamentally tilt that trade-off in favor of less income.

Why "Free" Is Costly

Because market prices reveal economically important information about costs and consumer wants, regulations and spending programs that distribute goods or services at below-market prices, such as for "free," have a number of unintended consequences (Hayek 1945). Fewer goods and services will be produced, and what is produced may be misallocated to consumers with comparatively little need. We explain below why the very idea that a single-payer government program will use its market power to obtain lower prices is an acknowledgment that the program will be purchasing less quantity or quality.

On the demand side of a market, people vary in their willingness to pay for the product or service, and their willingness varies over time. The market system allocates the available goods to consumers who are willing to pay more than the market price, while those not willing to pay the price go without. Willingness to pay is related to income, but it is also related to "need," at least as consumers perceive need. Consumers are, for example, willing to pay more for food when they are hungry and to buy health insurance when they are older. In this way, the market has a tendency to allocate goods and services when and to whom they are needed.

If the government decrees that a product shall be free, then something other than a willingness to pay the market price will determine who receives the available supply. It may be a willingness to wait in line, or political connections, or membership in a privileged demographic group, or a government eligibility formula (Shleifer and Vishny 1992; Barzel 1997; Glaeser and Luttmer 2003). By comparison with the market, giving a product away for free may sometimes have the effect of taking the good away from consumers when they need it most and transferring it to consumers when they need it least. As we show later in this report, single-

[19] E.g., Prescott (2004), Rogerson (2006), and Chetty et al. (2011).

payer healthcare programs tend to reallocate healthcare from old to young. Centrally planned agricultural systems have, in effect, taken food products away from starving people in rural areas and transferred the products to urban consumers or sold them on the international market.

Prices that are below their competitive levels also affect supply. Although a single government payer has market power that it can use to reduce the incomes of suppliers, the price reduction is accomplished by reducing the quantity or quality of what it purchases in order to squeeze its suppliers.[20] This may be one reason why single-payer healthcare systems have longer appointment wait times than in the U.S. system (see the sixth section of this report), and why "free" Nordic colleges yield lower financial returns than higher education in the United States, even though the Nordic returns include no tuition expense (see the fifth section below).

The Dismal Track Record of Highly Socialist Countries

Socialism is a continuum. No country has zero state ownership, zero regulation, and zero taxes. Even the most highly socialist countries have retained elements of private property, with consumers sometimes spending their own money on themselves (Pryor 1992). This report therefore begins with the historically common highly socialist regimes, by which we mean countries that implemented the most state control of production and incomes for at least a decade.[21] Of more than a dozen countries meeting these criteria, this section emphasizes Maoist China, Cuba, and the USSR, which are the subject of much scholarship, and Venezuela, which has been unusual as an industrialized economy with elements of democracy that nonetheless pursued highly socialist policies.[22]

Many of the highly socialist economies were agricultural, with state and collective farming systems implemented by socialist governments to achieve purported economies of scale and, pursuant to socialist ideology, to punish private landowners. Agricultural output dropped sharply when socialism was implemented, causing food shortages. Tens of millions of people

[20] This effect is the monopsony mirror image of monopoly pricing. Sellers with market power typically exercise it by constraining the quantity or quality of what they produce and thereby squeeze the buyers in the market (Williamson 1968; Farrell and Shapiro 1990; Whinston 2006). Buyers with market power typically exercise it by constraining the quantity or quality of what they purchase.

[21] The highly socialist countries are sometimes called "communist," although, as previously noted, communism has a different meaning in the theory of socialism. We presume that, in contrast to the Nordic countries, central government spending far exceeds private spending in highly socialist countries—although, with pervasive state ownership and centralized control, it is difficult to construct accurate measures of the components of spending that would be comparable between highly socialist countries and the rest of the world.

[22] Also recall, from the second section above, the parallels between modern socialist rhetoric and the statements attributed to Mao, Castro, and Lenin.

starved. It took quite some time for sympathetic scholars outside socialist countries to acknowledge that large state farms were less productive than small private ones.

The economic failures of highly socialist policies have been described at length by both survivors and scholars who have reviewed the evidence in state archives. Not only did highly socialist countries discourage the supply of effort and capital with poor incentives, but they also allocated these resources perversely because central planning made production decisions react to output and input prices in the opposite direction from those of a market economy.

Although agriculture is not a large part of the U.S. economy, present-day socialists echo the historical socialists by arguing that healthcare, education, and other sectors are unfair and unproductive, and they promise that large state organizations will deliver fairness and economies of scale. It is therefore worth acknowledging that socialist takeovers of agriculture have delivered the opposite of what was promised.

Present-day socialists do not want the dictatorship or state brutality that often coincided with the most extreme cases of socialism. However, peaceful democratic implementation of socialist policies does not eliminate the fundamental incentive and information problems created by high tax rates, large state organizations, and the centralized control of resources. As we report at the end of this section, Venezuela is a modern industrialized country that elected Hugo Chávez as its leader to implement socialist policies, and the result was less output in oil and other industries that were nationalized.[23]

When evaluating the misalignment between the promises of highly socialist regimes to eliminate the misery and exploitation of the poor and the actual effects of their policies, it is instructive to look at a major guide economists use to determine value: the revealed preference of the population—in other words, voting with their feet. Implementation of highly socialist policies, such as in Venezuela, have been associated with high emigration. Perhaps more telling is that historically socialist regimes—such as the USSR, China, North Korea and Cuba—have forcibly prevented people from leaving.

[23] See also the fifth section, on socialism in the Nordic countries, and the sixth section, on single-payer healthcare. Further evidence about the effects of socialism on nonagricultural industries are reported by Conquest (2005), Gregory (2004), Horowitz and Suchlicki (2003), and Kornai (1992). Johnson and Brooks (1983, 9) describe how the "Soviet rural road system can only be described as a disgrace, the result of decades of socialist neglect."

State and Collective Farming

State and collective farming (hereafter, "state farming") is a historically common practice in highly socialist countries.[24] The state acquires private farmland, and often much livestock, by force. The land is organized in large parcels, typically about one per village as compared with the multitude of parcels in a typical village before collectivization. Villagers were required to work on the land, with the output belonging to the state. Decisions were made by government employees and party apparatchiks, who may have had little or no experience or specialized knowledge in comparison with the original landowners (Pryor 1992). These decisions included devising and implementing complex systems of production targets and quality requirements (Nolan 1988).

The socialist narrative emphasizes exploitation, which in an agricultural economy refers to the power dynamic that determines the division of agricultural income between landlords and farm workers. State farms purport to end the exploitation by eliminating the landlords, known as kulaks in the USSR.[25] Another advantage of state farms, from the socialist perspective, was economies of scale (Pryor 1992). In principle, the knowledge and techniques of the best farmer could be applied to all the land rather than the comparatively small plot that the best farmer owned.[26] Capital may be easier to obtain for a larger organization. Writing about the USSR in 1929, Joseph Stalin stressed transforming "agriculture from small, backward, individual farming to large-scale, advanced, collective agriculture, to joint cultivation of the land." Writing about China in 1958, the British economist Joan Robinson asserted that "the minute fragmentation of the land" that prevailed before collective farming was a major source of inefficiency. The family itself was sometimes criticized as operating on too small a scale; in

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[24] State or collective farms were formed, e.g., in the USSR; elsewhere in the Soviet Bloc; and in Vietnam, North Korea, China, Cuba, South Yemen, Congo, Ethiopia, Cambodia, and Laos (Pryor 1992, chap. 4). In principle, participation in collective farms was voluntary, and operations were collectively managed by villagers, whereas state farms were owned and managed by government with the farm workers as government employees. In practice, even the collective farms may come "under the control of the Communist Party and the government," as they did in the USSR (Dolot 2011, chap. 2). See also Johnson and Brooks (1983, 4–5), Conquest (1986, 171), and Pryor (1992, 12–14).

[25] With landlords resisting the seizure of their property, the state often imprisoned or murdered landlords (Conquest 1986; Rummel 2011).

[26] The CEA is not aware of socialist explanations of why the best farmer owned comparatively little land or did not contribute his or her talents to a larger but purely voluntary collective. A neoclassical explanation might involve credit constraints and the like, or simply that it would not be efficient for the best farmer to control more land than he or she chose to purchase in the marketplace (i.e., the market reflects genuine limitations on scale economies; see also Conquest (1986).

China, household utensils were confiscated and villagers were assigned to communal kitchens for eating and food preparation (Jisheng 2012).[27]

Eyewitnesses tell a different story concerning the operation of state farms, and central planning more generally. In Cuba and the USSR, for example, the managers of state farms were chosen from the ranks of the Communist Party, rather than because of management skill or agricultural knowledge (Dolot 2011).[28] "The state monopoly stifled incentives for increasing production," describes a Chinese eyewitness (Jisheng 2012, 174–77). Production units sometimes had an incentive to produce less and to hoard inputs, in order to obtain more favorable allocations the next year (Gregory 1990).

The Opposite of What Was Promised

State farms reduced agricultural productivity rather than increasing it. The unwarranted faith in state farms had a doubly negative effect on agricultural output: Not only was less produced per worker, but workers were removed from agriculture, on the mistaken understanding that farming was becoming more productive (Conquest 1986). Both the lack of food and reliance on central planning rather than market mechanisms resulted in tens of millions of deaths by starvation.

Statistics from highly socialist regimes are informative, but necessarily imprecise. Gregory (1990), Kornai (1992), and others explain how officials in these regimes deceive their superiors and the public. Refugees from the regimes may be free to talk after their escape, but they may not constitute a random sample of the populations they left and may have imperfect memories. Readers are advised that the estimates in this section are necessarily inexact.

In Cuba, the disincentives inherent in the socialist system sharply reduced agricultural production. As O'Connor (1968, 206–7), explains, "Because wage rates bore little or no relationship to labor productivity and [state farm] income, there were few incentives for workers to engage wholeheartedly in a collective effort." Table 1 shows the change in agricultural production in Cuba spanning the agrarian reform period of 1959–63, when about 70 percent of farmland was nationalized (Zimbalist and Eckstein 1987). Production of livestock fell between 14 percent (fish) and 84 percent (pork). Among the major crops, production fell

[27] See also Lenin (1951).

[28] See also O'Connor's (1968, 205) description of Cuban state farms with "[inefficiencies] arising from overcentralized decisionmaking, together with a shortage of qualified personnel which was aggravated by a tendency to place politically reliable people in top administrative posts even when they lacked technical skills."

between 5 percent (rice) and 75 percent (malanga). The biggest crop, sugar, fell 35 percent. There was not a major Cuban famine, however, because of Soviet assistance and emigration.[29]

Table 1. Agricultural Production in Cuba Before and After the Nationalization of Farms

Livestock	Change from 1957–58 to 1963–64	Crop	Change from 1957–58 to 1963–64
Beef	-45%	Sugar	-35%
Pork	-84%	Corn	-39%
Poultry	-36%	Rice	-5%
Fish	-14%	Malanga	-75%
Eggs	-40%	Yucca	-56%
Milk	-39%	Potatoes	-50%

Source: Salazar-Carrillo and Nodarse-Leon (2015).

The CEA also notes that, while Cuba had similar gross national income to Puerto Rico before the Cuban Revolution in the late 1950s, by 2000 Cuban gross national income had fallen almost two-thirds relative to Puerto Rico.[30]

In the USSR, the collectivization of agriculture occurred with the First Five-Year Plan, 1928–32. Horses were important for doing the farm work, but their numbers fell by 47 percent, in part because nobody had much incentive to care for them when they became collective property (Conquest 1986). In the Central Asian parts of the USSR, the number of cattle fell more than 75 percent, and the number of sheep more than 90 percent (Conquest 1986). Looking at official Soviet data for about 1970, Johnson and Brooks (1983) concluded that the entire suite of socialist policies—"excessive centralization of the planning, control, and management of agriculture, inappropriate price policies, and defective incentive systems for farm managers and workers and for enterprises that supply inputs to agriculture"—was reducing Soviet agricultural productivity about 50 percent.[31]

A famine ensued in 1932 and 1933, and about 6 million people died from starvation (Courtois et al. 1999).[32] The death rates were high in Ukraine, a normally fertile region from which the

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[29] See Walters (1966) on Soviet economic aid to Cuba.

[30] Collins, Bosworth, and Soto-Class (2006) and the Barro-Lee data set, using GDP for Cuba in 1950. The result is more extreme if the comparison is based on GDP because people and businesses outside Puerto Rico have substantial claims on the production occurring there.

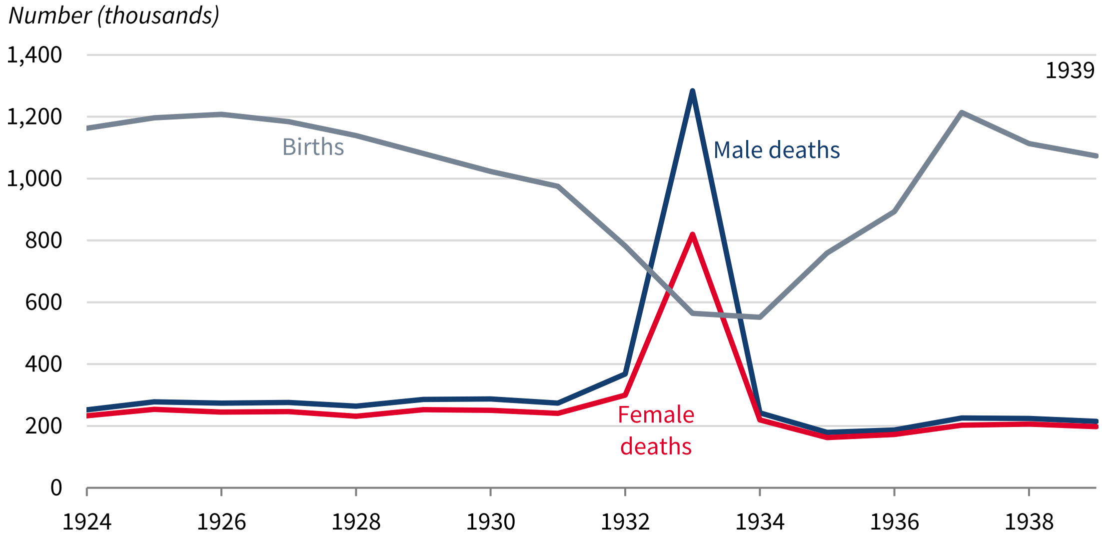
[31] This is likely an underestimate because, as Johnson and Brooks acknowledge, their research project was made possible through cooperation with the Soviet government.

[32] Conquest (1986, 301) cites 7 million.

Soviet planners had been exporting food.[33] Figure 2 shows the time series for Ukrainian deaths by sex, along with births. This time series also appears to show that millions more people were not born because of the famine.

Mao's government implemented the so-called Great Leap Forward for China from 1958 to 1962, including a policy of mass collectivization of agriculture that provided "no wages or cash rewards for effort" on farms.[34] The per capita output of grain fell 21 percent from 1957 to 1962; for aquatic products, the drop was 31 percent; and for cotton, edible oil, and meat, it was about 55 percent (Lin 1992; Nolan 1988).[35] During the Great Chinese Famine from 1959 to 1961, an estimated 45 million people died (Dikötter 2010). Figure 3 shows the time series for deaths and births, which form a pattern similar to Ukraine's, except that the absolute number of deaths was an order of magnitude greater.

Figure 2. Annual Sex-Specific Trends in Numbers of Births and Deaths in Ukraine, 1924–39



Source: Meslé and Vallin (2012).

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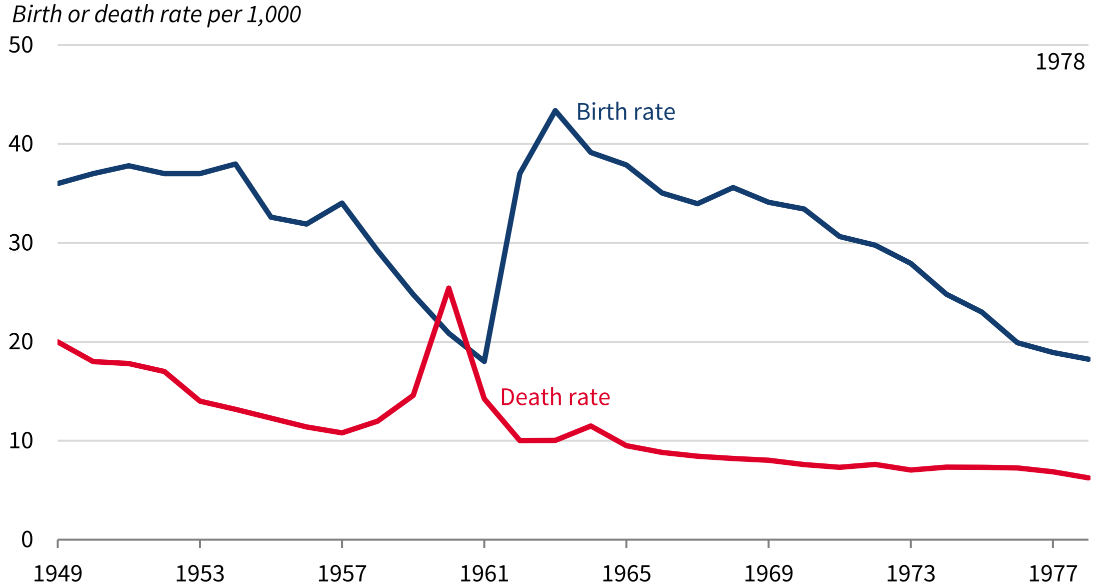
[33] In fact, the USSR as a whole was exporting grain at that time (Dalrymple 1964, 271; Courtois et al. 1999, 167). Note that there were also starvation deaths elsewhere in the USSR (Conquest 1986). In contrast to the famines associated with highly socialist regimes, Ó Gráda (2000) and Goodspeed (2016, 2017) find that one important margin of adjustment during the Irish Famine of 1845–51 was substantially increased net imports of relatively cheap corn and other grains, and similarly dramatically increased exports of higher-value agricultural output such as eggs, dairy products, and cattle.

[34] Meng, Qian, and Yared (2015, 1572), summarizing Walker (1965).

[35] See Cheremukhin et al. (2015) for aggregate productivity time series.

Figure 3. Birth and Death Rates in China per 1,000, 1949–78



Source: China National Bureau of Statistics.

Failed agricultural policies are not the only way that civilians died at the hands of their highly socialist state. Rummel (1994), Courtois and others (1999), Pipes (2003), and Holmes (2009) document noncombat deaths in the Soviet Bloc, Yugoslavia, Cuba, China, Cambodia, Vietnam, Laos, North Korea, and Ethiopia. These deaths exclude deaths in military combat, but include deaths in purges, massacres, concentration camps, forced migration, and both escape attempts and famines. The death rate in famines was particularly high in North Korea, where about 600,000 people died from starvation in the late 1990s out of a population of about 22 million (Goodkind, West, and Johnson 2011).[36] Cambodia's Communist period was especially violent.

The total noncombat civilian deaths in the highly socialist countries were a combination of the effects of government takeovers of important industries and brutal political systems. Modern American socialists are against state brutality. But it is a mistake to ignore the highly socialist tragedies altogether, because it was high taxes, large state organizations, and centralized control that delivered the opposite of what was promised and forced consumers to endure intolerably small supplies of food and other consumer goods. In other words, the low output of state farms and centralized planning was a result of economic failures that cannot be rectified with more peaceful implementation. Venezuela, discussed below, is a case in point.

[36] The CEA did not find comparable data on deaths for highly socialist regimes in Afghanistan, Angola, Benin, Congo, Mozambique, Somalia, and South Yemen. Such data may be lacking because their implementations may have been comparably peaceful from a civilian perspective.

Though the nationalization of agriculture depressed output, the privatization of the same land brought it surging back. Johan Norberg explains how, when Chinese villagers began to (secretly) privatize their land, the “farmers did not start the workday when the village whistle blew any longer—they went out much earlier and worked much harder. . . . Grain output in 1979 was six times higher than the year before.”[37]

Although socialist policies are ostensibly implemented to reduce poverty and inequality, it was the end of highly socialist policies in China that brought these results on a worldwide scale. China’s major reforms began in 1978, which is about the time that the poverty rate in China, and therefore world poverty rates and world inequality, began a remarkable decline (Sala-i-Martin 2006).[38] Policy changes in India also coincided with reduced poverty in that country, although it is debated whether the early Indian policies were socialist (Basu 2008). The end of socialism in the USSR increased inequality in that region, but this was not enough to offset, by worldwide measures, the progress elsewhere in the world (Pinkovskiy and Sala-i-Martin 2009).

Lessons Reluctantly Learned

Before the First Five-Year Plan, the USSR’s economists had observed the productivity losses that came with attempts to collectivize farming. Conquest (1986, 108) describes how they “still defended small scale agriculture in 1929—but soon had to repudiate that position.” The political leadership then prohibited the types of economic analysis that might show the opportunity costs of state farms (Conquest 1986).

Although the eyewitnesses saw in real time the economic problems with large state organizations, some distinguished economists outside the socialist countries dismissed any evidence that might suggest socialism to be a failure in the USSR or China. For instance, Paul Samuelson, the first American to win the Nobel Prize in economics, expressed surprise that the Soviet collective farms were not more productive than private land allotments (Samuelson 1976). As recently as 1989, he and William Nordhaus were still writing that “the Soviet economy is proof that, contrary to what many skeptics had earlier believed, a socialist command economy can function and even thrive” (Samuelson and Nordhaus 1989, 837). John Gurley (1969), one of the 11 managing editors of the *American Economic Review*, wrote that “the basic overriding economic fact about China is that for twenty years it has fed, clothed, and housed

[37] Norberg (2016, chap. 1), citing Zhou (1996).

[38] See also the official rural poverty measure (State Council of the People’s Republic of China 2016), which fell from 98 percent in 1978 to 6 percent in 2015.

everyone, has kept them healthy and has educated most. Millions have not starved."[39] As recently as 1984, John Kenneth Galbraith asserted that "the Russian system succeeds because, in contrast with the Western industrial economies, it makes full use of its manpower."[40]

The infamous journalist Walter Duranty privately estimated that 7 million people died from the Soviet famine, but instead he published Soviet propaganda in the *New York Times* during those years.[41] Meanwhile, the highly socialist governments themselves eventually acknowledged the value of private enterprises. As a means of increasing national output, Cuba, China, the USSR, and other highly socialist countries eventually permitted private enterprises both in and outside the agriculture sector to coexist with state-owned enterprises.[42]

Venezuela: An Industrialized Country with Highly Socialist Policies

Venezuela is not an agricultural economy, but it nationalized important parts of its economy, implemented effectively high marginal tax rates, and centrally controlled prices of consumer and other goods. As with the other highly socialist countries, its state-owned enterprises have proven to be unproductive. Millions of people have already fled the country.

The economies of the highly socialist countries described above are agricultural and labor intensive. An oil-rich country such as Venezuela that managed its oil assets well and paid cash royalties to its citizens independent of how much they earn could in principle be providing income for its citizens with zero marginal tax rates.[43] The economy could also be unregulated and without state-owned enterprises (with oil assets rented to private businesses to operate), and therefore not be socialist in any aspect of the definition introduced in the first section above. However, this is not the path taken by Venezuela over the past 20 years, when it

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[39] Gurley republished these ideas later (e.g., Gurley 1976, 13). Today, it must be acknowledged that the Great Chinese Famine was in the middle of Gurley's "twenty years" period, when everyone in China was supposedly fed.

[40] According to Schumpeter (1943, chap. XIII), these attitudes are to be expected. He says that intellectuals benefit from criticizing the social system in which they live, and that it is the abundance of the market system that allows intellectuals to be a large share of the population.

[41] He won a 1932 Pulitzer Prize for some of his publications about the USSR (Conquest 1986, 320). Though he personally visited the famine regions in 1933, his *New York Times* publications that year denied that there was a famine, and mocked a journalist who reported otherwise (Conquest 1986, 319; Applebaum 2017). Conquest explains how Duranty was further honored in New York City for telling "people what they wished to hear." The *New York Times* "publicly acknowledg[ed] his failures" in the 1980s (https://www.nytco.com/new-york-times-statement-about-1932-pulitzer-prize-awarded-to-walter-duranty/).

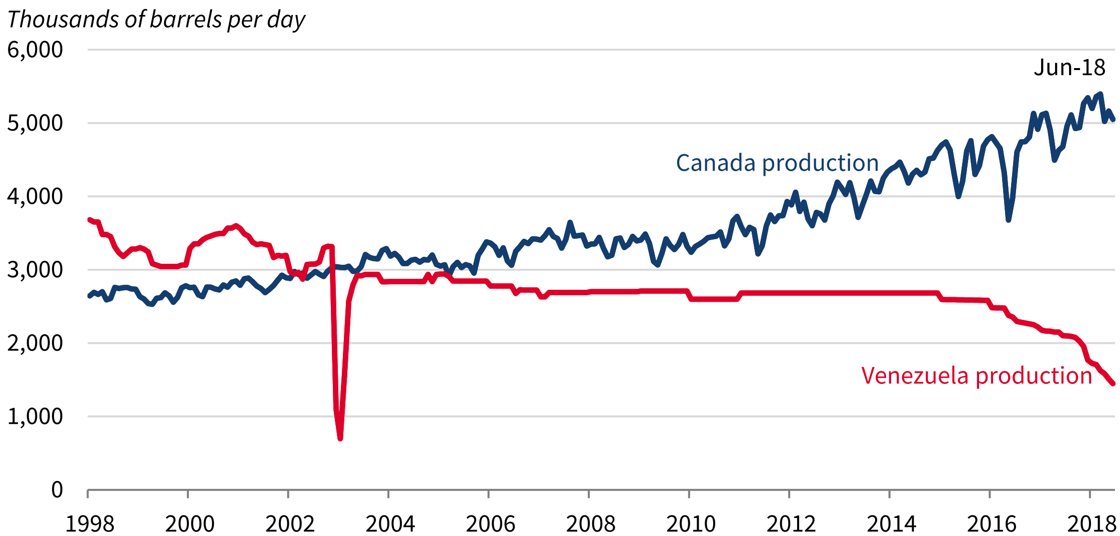
[42] See Johnson and Brooks (1983, 5–6), Zimbalist and Eckstein (1987, 13), Pipes (2003, 871), and Dikötter (2010, xxii).

[43] For example, the oil-rich state of Alaska has no sales or state income tax. Oil-rich Norway, conversely, has marginal tax rates that are similar to other Nordic countries (recall the fourth section above).

nationalized most oil assets and many other businesses, implemented effectively high marginal tax rates, and centrally controlled prices of consumer and other goods.

In 1999, "Hugo Chávez convinced the people of Venezuela they were being robbed by the greedy oil companies, dramatically raised taxes and royalties on new and existing projects. . . . The state-owned oil entity no longer possessed the know-how to develop its resources and production began declining" (*Oil Sands Magazine* 2016). Oil revenues were spent on generous social programs rather than investing in the country's oil production capacity or cutting taxes (*Economist* 2017; Monaldi 2018).[44] As shown in figure 4, Venezuela's oil production has been declining while production in Canada, which has petroleum resources similar to Venezuela's, has been increasing.[45]

Figure 4. Total Petroleum and Other Liquids Production, 1998–2018



Source: U.S. Energy Information Administration.

Venezuela nationalized several other businesses, ranging from cell phones to medicines. According to Transparency International (2017, 52), "From 2001 to 2017, the Venezuelan state went from owning 74 public enterprises to 526, four times more than Brazil (130) and ten times more than Argentina," and by 2016 state enterprise employment reached 6 percent of the entire workforce.

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[44] Under Hugo Chávez, the Venezuelan government "constructed a free healthcare program for people living in poor and marginalized areas," largely by importing about 31,000 medical personnel from Cuba (Brading 2013, chap. 4; Westhoff et al. 2010; see also Wilson 2015).

[45] The success of Canada's oil industry over the same time frame is one reason why the CEA believes that the economic disaster in Venezuela cannot be blamed on world oil markets.

Earning and spending are heavily taxed in Venezuela. The top rate on personal income is 34 percent, plus 11 percent for payroll. The value-added tax rate is 16 percent. Inflation is a tax implicitly paid while a worker or consumer holds currency; even during normal times, inflation was 2 percent per month. Import restrictions are relevant because, in a well-functioning economy based on natural resources, many consumer goods would be imported. Currency transactions, and international financial transactions generally, are tightly controlled, which means that an importer would in effect pay a tax when obtaining the foreign currency required to purchase foreign goods. As of 2012, the import tariff rate was 12.1 percent on nonagricultural goods. Imports are also at risk of theft by border patrol. If we take the foreign exchange and import theft rates to each be 10 percent, this puts the overall tax rate on earning for the purpose of obtaining consumption goods at over 60 percent.[46]

The Venezuelan economy does not benefit from price signals the way that less-regulated economies do. High inflation, which is expected to reach 1 million percent per year in 2018, makes it difficult to discern relative prices (Fischer, Hall, and Taylor 1981). Even without inflation, many prices are not determined by the market. In Venezuela, the 2011 Law of Fair Costs and Prices gives the Superintendent of Fair Costs and Prices (known as SUNDECOP) "broad authority to regulate the prices of almost all goods and services sold to the public," deciding "whether prices are 'fair' and to identify businesses that make 'excessive profits through speculation'" (USTR 2013). "Basic goods like flour and aspirin had fixed prices and were so cheap that companies had no incentive to make them" (Kurmanaev 2018).

Emigration has proven to be an important way that Venezuelan policies have reduced the supply of goods and services. Talented workers have emigrated from the oil industry and from medical practice (Dube 2017). Overall, about 2 million people have emigrated from the country in recent years (Alhadeff 2018).

Socialism and Living Standards in a Broad Cross Section of Countries

Of course, not all countries have pushed socialist policies to the extremes discussed in the previous section. To the extent that socialist policies would involve lesser increases in tax rates, the extensive literature on the effects of taxation could be used to assess some of the consequences of more moderate socialism, which is an approach pursued in the sixth section of this report.[47] But the tax literature does not address state-owned enterprises and centralized price setting, and how these socialist practices interact with high tax rates.

[46] This applies a 48 percent import share to consumption.
[47] An extensive review is provided by the CEA (2018a, chap. 1).

An extensive economic growth literature is helpful in this regard because it documents a relationship between real GDP and the degree of socialism, measured in a large sample of countries as the opposite of economic freedom. The studies suggest that moving U.S. policies to highly socialist policies would reduce real GDP at least 40 percent in the long run. Alternatively, adopting a 1975 Nordic level of socialism, which is about halfway toward our highly socialist benchmark of 2014 Venezuela, would reduce real GDP by at least 19 percent in the long run.[48] These effects are similar to those obtained with alternative methods in the fifth and sixth sections of this report.

The growth studies mainly rely on the Fraser Institute, which in 1996, in conjunction with 10 other institutes, published the book *Economic Freedom of the World 1975–1995*. Fraser has subsequently provided annual measures of the Economic Freedom of the World (EFW) Index, which measures the degree to which the policies and institutions of countries are supportive of economic freedom. Forty-two indicators are used to construct a summary index for each country and year that ranges between 1 for the least free and 10 for the most free. The indicators are aggregated to five main categories, which are then given equal weight in the overall index. The first category is the size of the government in terms of spending, taxation, and the size of government-controlled enterprises. The second is the legal system and property rights in terms of the protection of persons having such rights. The third category is referred to as "sound money," and measures policies related to inflation. The fourth is free international trade, which means that citizens are free to trade with other countries. The fifth is limited regulation, which addresses the freedom to exchange and trade domestically. Note that each category is an indicator of economic freedom, rather than political freedom or civil liberties.

Of particular interest in this report are the recent EFW values for the U.S. (8.0), the Nordic countries (averaging 7.5), and Venezuela (2.9).[49] Venezuela in 2016 was one of the least free in the entire country panel.[50] Also of interest is the Nordic average in 1975 (5.5), which was about when socialism peaked in those countries. In other words, the Nordic countries were once about halfway between where the U.S. and Venezuela have been recently, but now have economic freedoms that are much closer to those of the U.S.

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[48] In 2017, 19 and 40 percent of U.S. per capita GDP were, respectively, about $11,000 and $24,000.

[49] The year 2016 is the most recent one with comprehensive coverage. Alesina and Angeletos (2005) explain why fundamentally similar countries can nonetheless take quite different approaches to socialism and, conversely, that small political changes could result in a dramatic increase in a country's socialism.

[50] We also note that the highly socialist countries tend to be excluded from the data, in part because it is difficult to construct accurate measures of the components of spending that would be comparable between highly socialist countries and the rest of the world. Among the countries with EFW indices, the Marxist governments of 1990 Nicaragua and 1980 Congo have EFW values below 3.5, although so too do a few repressive anti-Marxist governments.

The EFW Index is related to our discussion of more socialist policies that involve increased public financing, public production, and regulations that replace each citizen's ability to spend his or her own money on himself or herself with the government's spending other people's money on others. As reviewed by Hall and Lawson (2014), the EFW Index has been cited and utilized in hundreds of academic articles. Their review discusses 402 articles, of which 198 used the EFW Index as an independent variable in an empirical study. They report that over two-thirds of these studies found economic freedom to correspond to improved types of economic performance, such as faster growth, better living standards, and more happiness, as well as other measures.

In particular, a large subliterature focuses on the correlation between the EFW Index and economic investment and growth, as reviewed by De Haan, Lundström, and Sturm (2006). One major study—by Gwartney, Holcombe, and Lawson (2006)—found that a 1-unit increase in the EFW Index from 1980 to 2000 was associated with a 2.6-percentage-point increase in private investment as a share of GDP and thereby a 1.2-percentage-point increase in annualized economic growth over 20 years.[51] This suggests that going from U.S. EFW to Venezuela's would reduce GDP by about two-thirds after 20 years.[52] Going to 1975, Nordic values of EFW would reduce GDP more than 40 percent.

Another study, by Easton and Walker (1997), found effects that are smaller although still economically significant. They estimate the elasticity of the steady state level of GDP per worker with respect to EFW of 0.61, so that going to Venezuela's EFW would reduce real GDP per worker by about 40 percent in the long run.[53] With the 1975 Nordic value of EFW, long-run GDP per worker would be reduced at least 19 percent. To the extent that socialism reduces the fraction of the population that works, the reductions in GDP per capita are even greater.

This evidence is suggestive as to the opportunity costs of socialism, but of course cross-country correlations are not necessarily causal. Moreover, the EFW Index is not exactly the inverse of

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[51] The other independent variables in the model are tropical location, coastal population, and human capital growth.

[52] The CEA notes that, at very low levels of economic freedom and therefore tax rates near 100 percent, it is difficult to predict GDP. The effects of, say, a 95 percent tax rate should be quite different from the effects of a 90 percent tax rate, because in the latter case workers keep twice as much as they do in the former. As previously noted, the data for the least-free countries are often lacking or are of especially poor quality.

[53] The other independent variables in the model are a transformation of the population growth rate, the physical investment rate, and schooling. Also recall the third section's estimates of the output effects of highly socialist policies: reductions of at least two-thirds (all of Cuba, as of the 21st century), about half (Soviet agriculture, circa 1970), and about three-fourths (Venezuelan oil production). Also of interest is the comparison of North and South Korea, where highly socialist North Korea appears to have about a 90 percent shortfall in GDP per capita (Rice et al. 2018). The CEA therefore refers to the output effect of highly socialist policies as "at least 40 percent" (negative).

socialism, and the various ingredients for the index can be difficult to measure. This evidence therefore needs to be considered together with the case studies in the third and fifth sections as well as the tax-impact analysis in the sixth section.

The Nordic Countries: Policies and Incomes Compared with the U.S.

The Nordic countries refer to Denmark, Finland, Iceland, Norway, and Sweden. This section looks at the Nordic countries in more detail because they are often singled out as countries with socialist policies and admirable economic outcomes. Though these countries have single-payer, universal-coverage health insurance, they do not impose a single payer on the entire nation, despite being more homogeneous countries than the United States (Anell, Glenngård, and Merkur 2012; Vuorenkoski, Mladovsky, and Mossialos 2008; Olejaz et al. 2012; Ringard et al. 2013; Sigurgeirsdóttir, Waagfjörð, and Maresso 2014).[54] Combining state, local, and central governments, public spending is about half of GDP in the Nordic countries, as compared with 38 percent of GDP for the United States (OECD 2018b). However, the Nordic countries do not have many other policies advocated by modern American socialists, such as high corporate taxes, heavy regulation of business, public monopoly of primary and secondary schooling, paying full benefits to people who have not worked, or healthcare that is free at the time of service.[55]

We find that today, the Nordic countries' marginal tax rates on labor income are not in fact far above those in the U.S., once implicit employment and income taxes are considered. Nordic-country living standards are still at least 15 percent lower than in the U.S. The private and social returns to a college education are higher in the U.S., even while college education is at least as common here. These results are consistent with the basic economic idea that redistribution and single-payer systems have significant costs in terms of reducing national incomes.

The Nordic countries themselves recognized the economic harm of high tax rates in terms of creating and retaining businesses and motivating work effort, which is why their marginal tax rates on personal and corporate income have fallen 20 or 30 points, or more, from their peaks in the 1970s and 1980s (Stenkula, Johansson, and Du Rietz 2014).

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[54] The exception is Iceland, which is a nation of less than 350,000 people and therefore smaller than even the least-populated U.S. state (Alaska).

[55] All the Nordic countries' health systems have user fees or out-of-pocket payments, whose share of overall health spending is similar to what it is currently in the United States (without "Medicare for All"). See Rice et al. (2018); Globerman (2016); Anell, Glenngård, and Merkur (2012); Olejaz et al. (2012); Ringard et al. (2013); Sigurgeirsdóttir, Waagfjörð, and Maresso (2014); and Vuorenkoski, Mladovsky, and Mossialos (2008). The CEA notes that single-payer, universal coverage and free healthcare (zero cost sharing) are not synonymous.

Do the Nordic Countries Have Socialist Tax Policies?

The Nordic countries are reputed to have taxes that are higher but "fairer" than those in the U.S. In fact, this reputation is only partly earned. The Nordic-country average tax rate on capital income is lower than in the U.S., even since the Tax Cuts and Jobs Act has lowered the top U.S. statutory corporate tax rate by 13 percentage points. Nordic taxes on labor are only somewhat higher than in the United States, especially once implicit taxes are acknowledged.

A key difference between Nordic and U.S. taxation is that the latter is considerably more progressive. With lower thresholds for their income tax brackets, the Nordic economies apply their highest marginal tax rate to taxpayers earning only marginally above-average income, meaning that low- and middle-income tax filers face substantially higher average rates in the Nordic countries than in the United States. Moreover, the Nordic countries rely more heavily on value-added, or consumption, taxes, which are not progressive. The higher tax revenue share of GDP in the Nordic economies is thus predominantly accounted for by a broader base, rather than by "taxing the rich." As shown below, Senator Bernie Sanders is currently proposing tax rates that are above the Nordic-country average in six of seven tax categories, with the exception being sales / value-added taxes.[56]

As shown in table 2, the corporate income tax rate in the Nordic countries ranges from 20 to 23 percent, which was about half the U.S. Federal and State statutory rate until 2018. The top personal rate on dividend income is 29 percent in the U.S., compared with 22 percent in Iceland, 29 percent in Finland, 30 percent in Sweden, 31 percent in Norway, and 42 percent in Denmark. Sweden and Norway have no estate tax, while the top estate tax rates range from 10 to 19 percent in the other three Nordic countries, as compared with 43 percent in the U.S.[57]

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[56] Senator Sanders proposes to repeal the Tax Cuts and Jobs Act, which reduce the combined Federal-State statutory corporate rate by 13 percentage points (Bollier 2018). The other rate proposals are reported by http://sanders.senate.gov and Cole and Greenberg (2016).

[57] All the countries have a zero rate for comparatively small estates. U.S. rates include the population-weighted average of State estate and inheritance tax rates.

Table 2. Tax Policies in the U.S. and Nordic Countries

	Levels						Difference from U.S. actual	
Tax policy	Denmark	Finland	Iceland	Norway	Sweden	U.S.	**Nordic average minus U.S.**	**Senator Sanders' proposal minus U.S.**
Taxes on capital								
Statutory corporate income tax rate	22	20	20	23	22	26	**-4**	**13**
Top personal rate on dividend income	42	29	22	31	30	29	**1**	**39**
Top personal rate on capital gains	42	33	20	27	30	29	**1**	**39**
Top estate or inheritance tax rate	15	19	10	0	0	43	**-35**	**24**
Taxes on labor or consumption								
Payroll tax rate (on a base of employer cost)	0	26	6	19	29	14	**2**	**7**
Top individual income tax rate	56	49	44	39	60	46	**3**	**12**
Sales or value-added tax	25	24	24	25	25	6	**19**	**N/A**
Progressivity of household taxes (mid-2000s)	1.02	1.20	0.90	0.95	1.00	1.35	**-0.34**	**N/A**

Sources: Organization for Economic Cooperation and Development; PwC (2018a); Tax Foundation (2016); Tax Policy Center (2016); CEA calculations.
Note: All rates are percentages. The OECD progressivity measure is the top decile's tax share divided by its income share and would be one for a proportional income tax. Corporate, dividend, and sales tax rates are for 2018. All other rates are for 2015–2017.

Senator Sanders has made specific proposals for the taxation of capital in the U.S. He voted against cutting the corporate income tax, which had a statutory rate of about 39 percent for Federal and State taxes combined, and he now rallies his followers to repeal the cut (Bollier 2018). This rate is well above where the U.S. and the Nordic countries are now. The senator has proposed a 68 percent rate on dividends and capital gains, which is more than double, or about 39 points above, where the U.S. is now.[58] He has also proposed adding 24 points to the top estate tax rate, even though the U.S. rate is already well above Nordic rates.

The Nordic countries are similar to the U.S. in terms of their payroll tax rates (combined for employer and employee) and the top personal income tax rate.[59] Even excluding implicit taxes, the overall top marginal tax rate on personal income in the United States in 2017, 46.3 percent (as calculated by the OECD), was only 3 percentage points below the Nordic average of about 50 percent.[60] Interestingly, Senator Sanders proposes increasing both payroll and personal income tax rates above the Nordic average, especially as regards the top personal rate.

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[58] The 68 percent rate includes 3.9 percentage points for State and local taxes (https://taxfoundation.org/how-high-are-capital-gains-taxes-your-state/), the top Sanders bracket inclusive of 2.2 percentage points for his additional personal income surtax (54.2), and Sanders's 10 percent ACA tax on investment income. See also https://www.taxpolicycenter.org/sites/default/files/alfresco/publication-pdfs/2000639-an-analysis-of-senator-bernie-sanderss-tax-proposals.pdf. The 68 percent does not include any phase-out of the rebate of Senator Sanders's proposed carbon tax.

[59] Some of the Nordic countries have privatized much of their old-age social security programs (Turner 2005).

[60] The Tax Cuts and Jobs Act temporarily reduces the Federal rate, and therefore the combined State-Federal rate, by less than 3 points.

None of the entries in table 2 incorporate implicit taxes, which refer to the loss or gain of transfer income that occurs when a household works or earns more. In the Nordic countries, implicit tax rates can be negative because working or earning more entitles a person to additional transfer income that helps offset some of the extra payroll, income, or sales tax that he or she will pay. In other words, a Nordic citizen with a history of working or earning more will receive a *greater* benefit when he or she has earned more in the past. For example, work is required in order to be eligible for full paid family leave, unemployment, or retirement benefits.[61] As a result, the disincentive to work in a Nordic country may be somewhat less than what is shown in table 2.

Working or earning does not entitle the Nordic citizen to additional health benefits, but at the same time, working and earning does not cause him or her to lose benefits, as it would in the U.S. In other words, U.S. programs tend to have positive implicit taxes on work because the people who work and earn more are paid fewer benefits.[62] Table 2 shows a gap between Nordic and U.S. marginal tax rates on labor income, but the true gap would likely be smaller if implicit taxes were fully considered.

Margaret Thatcher (1976) observed that "socialism started by saying it was going to tax the rich, very rapidly it was taxing the middle income groups. Now, it's taxing people quite highly with incomes way below." Obtaining large amounts of tax revenue ultimately involves resorting to high tax rates on the poor and middle class because these groups in the aggregate generate much of the Nation's income—what economists call "widening the tax base" (Becker and Mulligan 2003). One way that the Nordic countries broadly levy high rates is with a value-

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[61] See Anderson et al. (2007), Rogerson (2007), and Kleven (2014), who describes "the strong subsidization of goods that are complementary to working." See also Gruber and Wise (1999) on retirement benefits. U.S. unemployment and retirement benefits can be tied to work history, too (Feldstein and Samwick 1992), but by comparison with the Nordic countries, these negative implicit taxes are smaller because the full benefit amounts are smaller. U.S. welfare programs have sometimes required work from able-bodied adults (Mulligan 2012), although Senator Sanders and Senator Warren have opposed such requirements (https://www.facebook.com/senatorsanders/posts/work-requirements-dont-improve-employment-they-just-leave-more-people-hungry-des/10157113484572908/) or have recommended more exemptions from them (https://www.warren.senate.gov/newsroom/press-releases/with-snap-under-attack-warren-blumenthal-colleagues-introduce-legislation-to-ensure-recipients-seeking-employment-dont-unfairly-lose-benefits). The CEA also notes that Senator Sanders proposes to increase implicit marginal income tax rates by phasing out the rebate of a proposed carbon tax (Mermin, Burman, and Sammartino 2016). The collection of such a tax also shares some economic features with sales taxes.

[62] Health premium tax credits and Medicaid eligibility are two important examples in the health area (Mulligan 2015). Food stamps and public housing are two more U.S. assistance programs that have positive implicit tax rates on employment and income.

added tax (VAT), which is essentially a national sales tax. Regardless of whether they are rich, poor, or in between, Nordic households are required to pay an additional VAT of 24 or 25 percent on their purchases, on top of all the other taxes that they pay.[63] By comparison, sales taxes vary by U.S. State, but none is that high, and the national average rate is about 6 percent.

Even without the VAT, the high Nordic rates apply to everyone, not just the rich. The OECD prepares a measure of progressivity that is the share of nationwide household taxes paid by the top 10 percent of citizens (ranked by their income), expressed as a ratio of the share of national aggregate income.[64] The ratio would be 1 if the household taxes were a fixed proportion of income. A regressive (progressive) tax would have a ratio less (greater) than 1, respectively. As shown in table 2's last row, four of the Nordic countries have essentially proportional household taxes.[65] The average progressivity of all five countries is 1.01, which is 0.34 *less* progressive than in the U.S.

Another indication of the progressivity of U.S. income taxation relative to the Nordic countries is the threshold, expressed as a multiple of the average wage[66], at which the top marginal income tax rate comes into effect. As shown in figure 5, in the United States, the top marginal rate only applies to income above eight times the average wage. In contrast, on average, in the Nordic countries the top marginal income tax rate applies to income that is only 1.5 times the average wage. Indeed, in Denmark, earnings that are just 1.3 times the average are already subject to the top tax rate. To put this in perspective, if the U.S. tax code were as flat as that of Denmark, a filer earning just $70,000 a year would already face the top marginal personal income tax rate of 46.3 percent, whereas the U.S. code allows a filer to earn as much as 6 times that, or $423,904, before paying that rate.

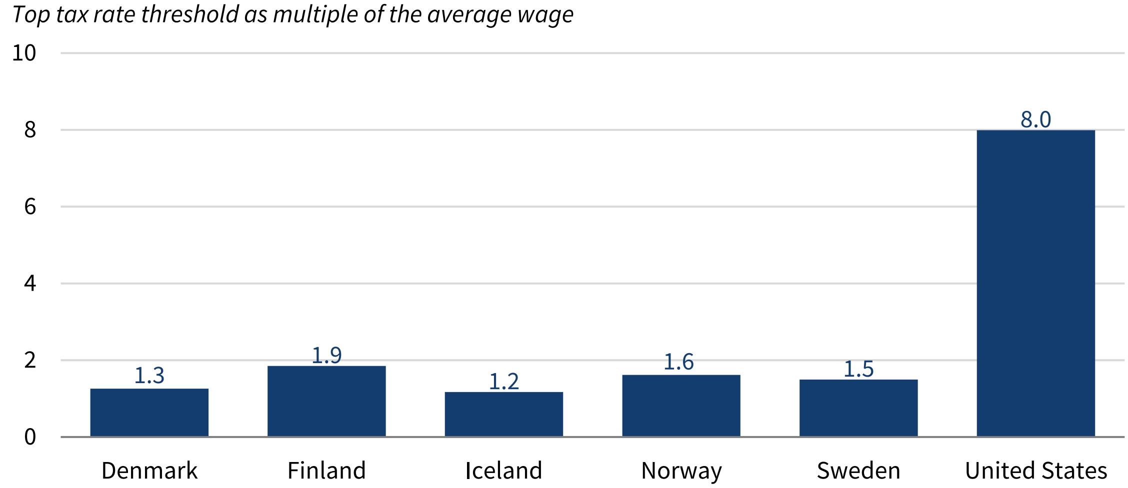
[63] The sales price of retail items is usually quoted inclusive of the VAT. Note that a sales tax rate cannot be added to income tax rates to get a meaningful overall rate because the sales tax is levied on a smaller base. For example, a 25 percent sales tax is like a 20 percent income tax.

[64] The OECD refers to income and payroll (employee part only) taxes as "household taxes" (OECD 2018c).

[65] Household taxes, which include personal income taxes, can be essentially proportional even while personal income tax rates rise with income because payroll tax rates fall with income and/or high-income taxpayers have disproportionate deductions from income for tax purposes.

[66] The term "average" refers to the mean.

Figure 5. The Progressivity of Personal Income Tax Structures in the Nordic Countries and the United States



Source: Organization for Economic Cooperation and Development.
Note: For example, if the U.S. threshold as a multiple of the average wage was lowered to Denmark's, the top marginal tax rate would apply to filers earning just $68,802.

Lower personal income tax progressivity in the Nordic countries, combined with lower taxation on capital and on average only modestly higher marginal personal income tax rates on the right tail of the income distribution, means that a core feature of the Nordic tax model is higher tax rates on average and near-average income workers and their families. That is, contrary to the misperceptions of American proponents of Nordic-style democratic socialism, the Nordic model of taxation relies heavily not on imposing punitive rates on high-income households but rather on imposing high rates on households in the middle of the income distribution. This is illustrated in table 3, which reports that even after accounting for transfers, a one-income couple earning the average wage, with two children, faces an all-in average personal income tax rate of 22 percent in the Nordic countries (counting government transfers as a negative tax), as compared with a rate of 14.2 percent in the United States. This comparison for the various family types suggests that American families earning the average wage would be taxed $2,000 to $5,000 more per year net of transfers if the United States had current Nordic policies.

Table 3. All-In Average Personal Income Tax Rate at Average Wage Less Transfers, 2017

Country	Single individual with 2 children (less transfers)	1-Income earner couple with 2 children (less transfers)
Denmark	16.5	25.3
Finland	21.8	24.7
Iceland	24.8	18.6
Norway	19.4	22.5
Sweden	18.8	18.8
United States	17.1	14.2

Source: Organization for Economic Cooperation and Development.

Do the Nordic Countries Have Socialist Regulatory Policies?

In its Economic Freedom of the World Index, on average the Fraser Institute rates the Nordic economies, and particularly Denmark and Sweden, above the OECD mean with respect to regulatory freedom, while the Heritage Foundation ranks all the Nordic economies higher than the United States for business freedom (Gwartney, Lawson, and Hall 2017; Miller, Kim, and Roberts 2018). OECD data show that the Nordic countries have less regulation in their product markets and more regulation in their labor markets in comparison with the United States. The Nordic countries are fairly similar to the average OECD member country on the regulation measures.

The top rows of table 4 show how the OECD ranks all five Nordic countries as having less product-market regulation than the United States, largely due to Nordic deregulation actions over the past 20 years. In comparison with the Nordic countries, the study finds the United States to be especially high on price controls and command-and-control regulation of business operations.[67]

[67] See also McCloskey (2016, 24) and the regulation components of the Fraser Economic Freedom of the World Index. The OECD product market survey was limited to the State of New York, and therefore may not be representative of the rest of the country. The data show the U.S. suffering from relatively high regulatory protection of incumbents due to exemptions from antitrust laws for publicly controlled firms (OECD 2018c). In addition, the OECD notes that U.S. product market regulation is more restrictive than other OECD economies due to the prevalence of State-level ownership of certain enterprises, particularly in the energy and transportation sectors. To the extent that the Nordic countries have lower product market regulation, this may somewhat offset their higher marginal tax rates on labor income (Fang and Rogerson 2011).

Table 4. Regulation Policies in the U.S. and Nordic Countries, 2013

Regulation policy	Denmark	Finland	Iceland	Norway	Sweden	Nordic average	U.S.	OECD average
	Levels							
Product markets	1.2	1.3	1.5	1.5	1.5	**1.4**	**1.6**	**1.7**
Public ownership	2.8	3	2.6	3.3	3.4	**3**	**3**	**2.7**
Price controls	0.6	0.9	1.4	0.7	0.4	**0.8**	**2.6**	**1.4**
Command and control regulation	1.4	1.7	1.3	1.2	1.6	**1.5**	**2.2**	**1.9**
Employment protection	2.1	2.4	2	2.2	2.5	**2.3**	**0.5**	**2.0**
Addendum: temp employment as % of total	10	13	9	7	13	**10**	**2**	

Sources: Organization for Economic Cooperation and Development; European Commission.
Note: Organization for Economic Cooperation and Development measures of regulatory strictness. Organization for Economic Cooperation and Development product-market measures for the U.S. refer to New York state only. Each table entry is a regulation index, with a higher value referring to more regulation.

The Nordic countries do not have minimum wage laws, although the vast majority of jobs have wages limited by collective bargaining agreements. The Nordic countries have more employment protection legislation, although they obtain labor market flexibility with intensive use of temporary employees.[68]

Income Comparisons with the U.S.

The average real GDP per capita in the U.S. is about 20 percent above the averages in Denmark, Finland, Iceland, and Sweden. The comparison with Norway is similar, too, if we adjust for Norway's large oil income. Indeed, Alaska and North Dakota—U.S. States that, like Norway, have high oil output per person—enjoy per capita GDP that is 15 and 4 percent higher, respectively, than Norway's.

At the same time, people of Nordic descent currently *living in the U.S.* have incomes about 25 percent above the average American (regardless of descent), and therefore have incomes about 50 percent above the average of the people resident of their home country. In other words, if the U.S. were to take on all the characteristics of a Nordic country, it could expect its incomes to be sharply lower.

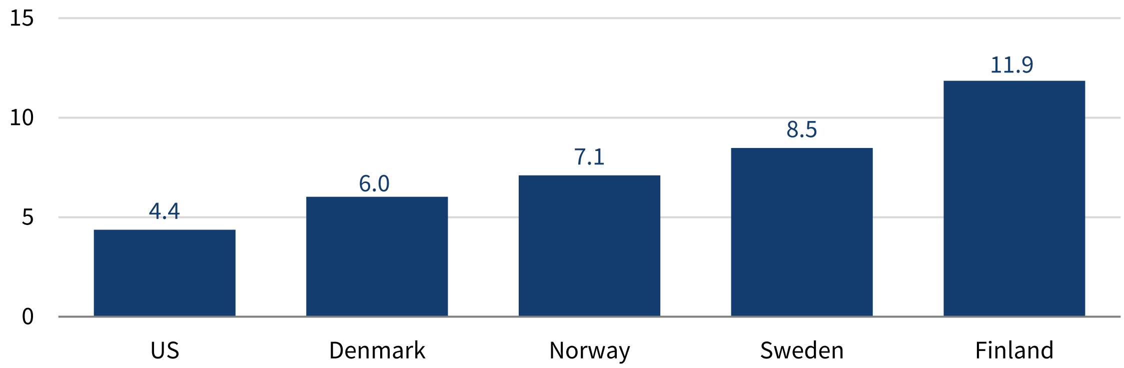
To begin understanding the financial consequences of living in a Nordic country rather than the U.S., consider the cost of owning and operating a pickup truck, which is one of the most popular personal vehicles in the U.S. We take the case of one of the smaller trucks, the Ford Ranger, because the larger pickups are difficult to obtain, park, and so on in a Nordic country.[69] The truck starts at $24,300 in the U.S., as compared with about $40,500 in Finland (including

[68] U.S. temporary employment is about 2 percent of overall employment (Saint Louis Federal Reserve series TEMPHELPS and PAYEMS), whereas it ranges from 9 to 17 percent in the Nordic countries (Svalund 2013).
[69] Even smaller pickup trucks are comparatively rare in the Nordic countries, in large part because of the additional expenses of documented here.

VAT). Fuel taxes, which are higher in the Nordic countries than the U.S., and the fact that paying these expenses requires work and thereby further tax expenses, also adds the cost of ownership in the Nordic countries. As a result, owning and operating a pickup truck costs the average worker in a Nordic country substantially more than it costs the average American worker. In the U.S., 4.4 hours of work per week is enough to earn, after labor income taxes, enough to pay toward the purchase price and to pay the fuel costs. The average worker in a Nordic country has to work between 6.0 hours per week in Denmark and 11.9 hours per week in Finland, as shown in figure 6. The greater ownership costs in the Nordic countries reflect a combination of higher retail prices (including VAT), higher fuel costs, lesser wage rates, and somewhat greater marginal tax rates on labor income.

Figure 6. Weekly Cost of Owning and Operating a Pickup Truck, by Country

Hours of work needed to earn the after-tax income to cover the cost



Sources: Ford Motor Company; Organization for Economic Cooperation and Development; *Wall Street Journal*.
Note: Estimates are based off the starting price for a Ford Ranger XL. U.S. estimate uses starting price for the 2019 model. Operating costs are taked to be fuel for 1,000 miles per month. These are costs for personal ownership. Local currency units are converted to weekly work hours using OECD estimates of the average full-time-equivalent wage and the marginal tax wedge for the principal earner in a single-earner married-couple family with two children and earning the average wage.

Figure 7 extends the pickup-truck results to all goods and services in the economy by using the real income and production statistics. The blue bars show real GDP per capita in the home country relative to the average for the entire U.S.[70] Four of the bars are negative, meaning that those countries have less GDP per capita. Despite being an oil-rich country, Norway's average GDP per capita is only somewhat above the U.S. average, and is 13 percent below the average GDP per capita in the oil-rich State of Alaska (not shown in the figure).

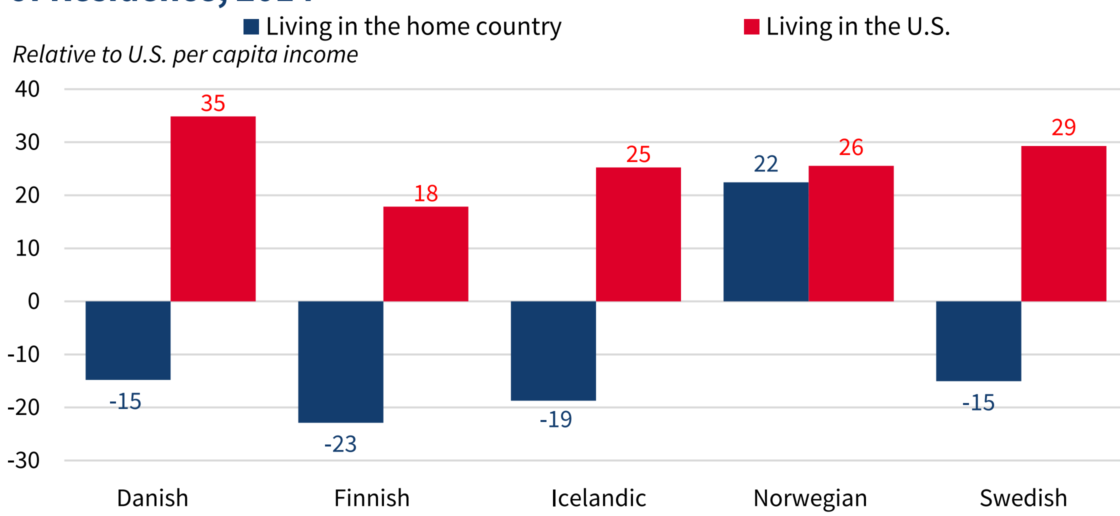
Furthermore, it has been noted that the true U.S./Nordic output gap is likely even greater because the U.S. has more nonmarket household production, such as at-home child care or

[70] Note that GDP includes both private and public sectors and therefore resources received by households from the public sector. The U.S./Nordic gap for disposable income would be even more dramatic.

home schooling, than Nordic countries do. Nordic countries tend to do more of their child care in the marketplace because child care is a government job. As Sherwin Rosen (1997, 82) described Sweden, “a large fraction of women work in the public sector to take care of the children of other women who work in the public sector to care for the parents of the women who are looking after their children. If Swedish women take care of each other’s parents in exchange for taking care of each other’s children, how much additional real output comes of it?”

Figure 7’s red bars show the per capita income of people with Nordic ancestry living in the U.S., and therefore not subject to Nordic tax rates and regulations.[71] They have incomes of about 30 percent more than the average American and, based also on the red bars, about 50 percent more income than the average in their home country. This suggests that the incomes of Nordic people are not lower because, apart from public policy, low incomes are somehow part of Nordic culture.

Figure 7. Income per Capita of People of Nordic Ancestry, by Place of Residence, 2014



Sources: U.S. Census Bureau; CEA calculations.
Note: International comparisons are for real GDP on a purchasing-power-parity basis.

However, the difference between the incomes of Nordic people in the U.S. and Nordic people living in the Nordic countries is too large to be entirely due to policy differences between the two sets of countries. One contributing factor may be that ancestry is self-reported and that, holding actual ancestry constant, the propensity to identify with Nordic ancestry may be

[71] Most of them were born in the U.S. See also Sanandaji (2015, 2016).

correlated with income. Another factor may be that there was positive self-selection bias among Nordic emigrants to the United States. That is, those who emigrated from the Nordic countries to the United States would be earning more than the home country average if they and their families had not emigrated.[72]

Another indicator of differences in material well-being in the Nordic economies and the United States is average individual consumption per head. Table 5 reports average individual consumption per head at current prices and exchange rates, adjusted for purchasing power parity, with the United States indexed to 100. In 2016, the most recent year for which data are available, average individual consumption per head was 31 percent lower in Denmark than in the United States, and 32 percent lower in Sweden than in the United States. The only Nordic economy in which average consumption is within 20 percent of the U.S. level is Norway, where average consumption per head is 82 percent of the U.S. level.

Table 5. Actual Individual Consumption Per Head at Current Price and Purchasing Power Parity, United States = 100

Countries	2016
Denmark	69
Finland	70
Iceland	69
Norway	82
Sweden	68
United States	100

Source: Organization for Economic Cooperation and Development, National Accounts.
Note: Actual Individual Consumption (AIC) consists of the consumption goods and services acquired by individual households. According to the Organization for Economic Cooperation and Development, AIC is the sum of three components: 1) "The value of households' expenditures on consumption goods or services including expenditures on nonmarket goods or services sold at prices that are not economically significant"; 2) "The value of the expenditures incurred by government units on individual consumption goods or services provided to households as social transfers in kind"; and 3) "The value of the expenditures incurred by NPISHs on individual consumption goods or services provided to households as social transfers in kind."

Though the Nordic economies exhibit lower output and consumption per capita, they also exhibit lower levels of relative income inequality as conventionally measured. Table 6 reports Gini coefficients, a standard way of measuring inequality, for disposable income after taxes and transfers in the Nordic economies and United States in 2015. On average, the U.S. Gini coefficient is 0.1 percentage point higher than the Nordic economies', indicating higher relative

[72] However, recent research suggests the sign of selection bias for Nordic emigrants is ambiguous. Specifically, Abramitzky, Boustan, and Eriksson (2012) study Norwegian emigration to the United States during the "Age of Mass Migration," from 1850 to 1913, exploiting within-household variation in emigration status to compare outcomes for Norwegian brothers who emigrated versus those who did not. They find negative selection bias among migrants from urban areas, and mixed results for those from rural areas. These results are also consistent with those of Borjas (1987, 1991).

income inequality. The Palma ratio—the ratio of disposable income at the 90th percentile to disposable income at the 50th percentile—is also higher in the United States than in the Nordic countries, as reported in table 6.

Table 6. Relative Income Inequality, 2015

Country	Gini coefficient (disposable income, post taxes and transfers)	Palma ratio (P90/P50 disposable income decile ratio)
Denmark	0.26	1.7
Finland	0.26	1.7
Iceland*	0.25	1.7
Norway	0.26	1.7
Sweden	0.27	1.7
United States	0.39	2.3

Source: Organization for Economic Cooperation and Development, National Accounts.
Note: Data for Iceland are for 2014.

By some measures, even poor American households have better living standards than the average person living in a Nordic country. Using 1999 data, Fredrik Bergström and Robert Gidehag (2004) found that all the States of the United States had a smaller percentage of households with incomes below $25,000 than Sweden did. As a country, the percentage was less than 30 for the United States, as compared with more than 40 for Sweden. Robert Rector and Kirk Johnson (2004) reviewed evidence from a sample of 15 European countries and found that homes were smaller for the *average* in all three of the sample's Nordic countries (Denmark, Finland, and Sweden) than they were for *poor* households in the United States.

The income and production results from this section, and the health results from the third section above, suggests that there are significant opportunity costs of pursuing Nordic public policies. One might guess that the opportunity costs of pursuing even more socialist public policies—current American socialists are proposing as much—are even greater. The fifth section therefore turns to the evidence from highly socialist countries.

Nordic Colleges Are Free, but Are They Worth It?

An OECD study of education systems reports that college tuitions are zero in Denmark, Finland, and Norway (OECD 2018a).[73] Given that modern American socialists advocate free college paid for by the Federal government, it is worth looking at the Nordic experience in this area to see

[73] No data were reported for Iceland or Sweden.

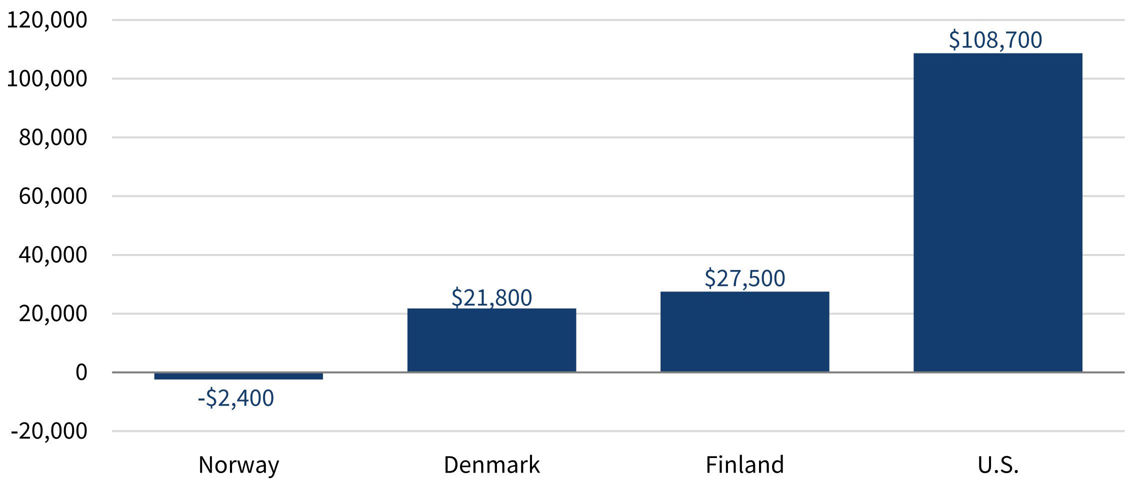
whether, consistent with the economics of socialism, offering college for free affects its quality.[74]

The same OECD study estimates that, while many American students pay tuition, Americans are somewhat more likely to attain tertiary education on average. In comparison with the tertiary schooling returns in the Nordic countries, American college graduates get their tuition back with interest, and also a lot more. To put it another way, the rates of return to a college education in Nordic countries are low, and propensities to invest are not high, despite the fact that such an investment requires no tuition payments out of pocket.

Figure 8's bars, measured on in U.S. dollars adjusted for purchasing power parity, shows the OECD's estimates of net present financial value of a college education in the four countries, for men, discounted with an 8 percent interest rate.[75] The OECD's estimates of the financial payoff to a U.S. college education are far greater, despite the fact that tuition payments count as negatives in the calculations.

Figure 8. Net Lifetime Private Financial Returns for a Male Attaining Tertiary Education

Equivalent U.S. dollars converted using PPP for GDP



Source: Organization for Cooperation and Development; Education at a Glance.
Note: For 2017, discounted at an 8 percent annual real discount rate. PPP is purchasing power parity.

[74] See the College for All Act of 2017, introduced in the U.S. Senate as S. 806, with eight senators sponsoring or cosponsoring it.
[75] The country pattern is similar with the lesser discount rates also shown by the OECD, and similar for women (although female returns are not shown with the 8 percent rate). Among the various discount rates used by the OECD (2018a), the CEA uses the one closest to the net marginal product of physical capital.

The calculations are comparing two lifetime cash-flow profiles: (a) beginning work after high school and getting the earnings (after taxes) associated with that level of education and (b) earning nothing during the college years, and paying tuition (if any), but then earning (after taxes) associated with a college education. Note that high-school profile (a) has positive cash flows during the college ages, whereas college profile (b) has negative or zero cash flows according to the amount of tuition. A positive value means that the investing the positive college age cash flows from the high-school profile (a) at 8 percent yields less than the borrowing to pay tuition if any and then enjoying the extra earnings associated with college. A negative value, as for Norway, means that a student who could invest his high school earnings at 8 percent per year (real) would be financially ahead by working during his or her college ages rather than going to college. The U.S. value of $108,700 means that the present value (discounted at 8 percent) of the college profile (b) exceeds the present value of the high school profile a by $108,700.[76]

Taxes and tuition subsidies are among the reasons that the financial value of a college education varies across countries. Their effects on the results can be removed by looking at earnings before taxes and by including public tuition subsidies as a cost. Even from this social (private plus public) perspective, the U.S. financial return is more than double the Nordic returns.[77] This is consistent with the economic hypothesis advanced in the second section above that making a good free reduces its quality.[78]

Socialized Medicine: The Case of Medicare for All

Over the next few decades, the health sector is projected to grow to a fourth or even a third of the U.S. economy (CMS 2018a), and a free, single-payer healthcare system continues to be the cornerstone of current socialist policy proposals in the United States. The Senate and House "Medicare for All" (M4A) plans, sponsored or cosponsored by 141 members of Congress, are designed to use the scale economies of a public monopoly to sharply cut costs (S. 1804; H.R.

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[76] The net present value is even greater if smaller discount rates are used (OECD 2018a, 109).

[77] The data provided by OECD (2018a) only permit adding private and social returns when both are discounted at 2 percent per year.

[78] See also Kirkeboen, Leuven, and Mogstad (2016) on the returns to postsecondary education in Norway and Murphy, Scott-Clayton, and Wyness (2017) on the effects of free college in England on education expenditure per student. Note that the returns pattern in figure 9 cannot be explained by a higher propensity to attain college in Nordic countries because the tertiary education attainment rates among persons age 25–54 range from 31 to 35 percent in the three Nordic countries, whereas the U.S. rate is 36 percent (OECD 2018a, table A1.1; these percentages do not include short-cycle tertiary degrees, although conclusions would be similar if they were included.).

676).[79] These plans make it unlawful for a private business to sell health insurance, or for a private employer to offer health insurance to its employees.[80] Although, at the time of passing the ACA, it was promised that consumers could keep their doctor or their plan, M4A takes the opposite approach: all private health insurance plans will be prohibited after a four-year transition period.[81]

Echoing historic claims about state-run enterprises, it is claimed that the government monopoly will be more productive by avoiding "waste" on administrative costs, advertising costs, and profits and will use its bargaining power to obtain better deals from healthcare providers. Modern journalists and analysts routinely claim that single-payer programs are more efficient—and thus are similar in spirit to Lenin and Mao, who justified government takeovers on the basis of the virtues of single-payer programs.[82]

Socialized medicine is an important example of the issues raised by Milton Friedman's four spending categories portrayed in figure 1 above. It has individuals (government employees) spending others people's money (taxpayers) on other people than themselves (program participants). The first issue concerns the inefficient financing of a program when using other

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[79] See also Sanders (2017).

[80] More precisely, M4A makes it unlawful for private companies or employers to sell or offer health insurance that covers "medically necessary or appropriate" hospital services, or ambulatory patient services, or primary and preventive services, or prescription drugs, or medical devices, or biological products, or mental health services, or substance abuse treatment, or laboratory/diagnostic services, or reproductive care, or maternity care, or newborn care, or pediatrics, or oral health services, or audiology services, or vision services, or short-term rehabilitative and habilitative services and devices (Sections 107 and 201 of the Medicare for All Act of 2017 and Section 104 of the House bill). The House bill (Section 102) adds dietary and nutritional therapies, long-term care, palliative care, chiropractic services, and podiatric care to the list of services that cannot be lawfully covered by private or employer plans. It has been noted that M4A does not turn health providers into government employees (although Section 103 of the House bill requires all participating providers to surrender their for-profit status). Nevertheless, because the bill makes private health insurance unlawful, health providers have no choice but to receive their income and instructions from the Federal government or from the relatively few people who want to purchase their services without insurance. Recall that the definition of socialism does not much distinguish between means of production that are owned from means of production that are regulated by the state.

[81] This also echoes back to the socialization of agriculture. For example, the Chinese Communist Party's collectivization agenda was initially discouraged by the "deep attachment" of the peasants to their land (Walker 1965, 4).

[82] See Kliff (2014), Frank (2017), and Konrad (2017). See also Weisbart (2012). The China scholar Peter Nolan (1988, 4) warns that "none [of socialism's errors] has been so important as the misplaced belief in the virtues of large-scale . . . units of production."

people's money, and the second issue concerns the low productivity of a program in translating tax revenues into outputs valued by participants such as improved health.[83]

In this section, we assess the evidence for the financing and program productivity issues raised by "Medicare for All." We define this program as having a monopoly public insurance plan and, unlike any Nordic country, zero out-of-pocket spending at the time of healthcare service.[84] The price paid to the government monopoly in health insurance, the analog to revenue received by private plans, would be determined through tax policy. For those analyses that are quantitative, we focus on the year 2022, giving M4A a reasonable amount of time to be adopted and implemented.

The quality or productivity of the monopoly plan would be determined through centrally planned rules and regulations. As opposed to a market with competition, if a patient did not like the tax charged or the quality of the care provided by the government monopoly, he or she would have no recourse. In addition, price competition in healthcare itself, as opposed to health insurance, would be completely eliminated because all the prices paid to providers and suppliers of healthcare would be set centrally by the single payer. The plan also differs from the currently popular Medicare program by eliminating cost sharing; by preventing private health plans from competing, as in the Medicare Advantage program; by preventing private markets from supplementing the public program; and, according to the House bill, by prohibiting healthcare providers from earning profits. Moreover, even if M4A made no changes to Medicare operations, it still would have the problem of taking a program that functions well for about a sixth of the population and making it work on a vastly larger scale.

A smaller economy is one of the adverse effects, due to M4A's disincentives to work and earn. If financed solely through higher taxes, we find that the program would reduce long-run GDP by 9 percent and household incomes after taxes and health expenditures by 19 percent. Evidence on the productivity and effectiveness of single-payer systems suggests that M4A would reduce longevity and health, particularly among the elderly, while only minimally increasing the fraction of the population with health insurance.

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[83] Other policy areas, such as public primary and secondary schools, have elements of figure 1. M4A is different in that it prohibits private competition. Moreover, public schools compete against each other in suburban areas, whereas M4A has no such mechanism. Perhaps the closest schooling analogy would be urban public school systems before the advent of charter schools, magnet schools, and voucher systems. The earlier urban systems proved to be less productive than private schools (Neal 1997, 1998). Perhaps the ultimate indicator of the additional value created by having private schools is that a great many families pay tuition at those schools even while their public school is "free."

[84] For out-of-pocket payments for Nordic countries, see Rice et al. (2018) and Globerman (2016).

Financing "Medicare for All"

The first issue with implementing such a program is its financing. In 2022, the Centers for Medicare and Medicaid Services (CMS), which administers most government-financed healthcare, projects that the private sector will spend $1.47 trillion on private health insurance and $0.46 trillion in out-of-pocket health expenses, in an economy with a total GDP of $24.35 trillion.[85]

Because healthcare is free at the time of service to users under M4A, and otherwise would not be "free" for those not on government programs, M4A increases healthcare utilization at Federal expense. We use Blahous's extra-utilization estimate (2018) of $0.44 trillion in 2022 for a total addition to Federal spending of $2.37 trillion. Without M4A, $2.37 trillion would be 9.7 percent of GDP, or 11.7 percent of consumption, or an average of about $18,000 per household.[86]

Using these estimates, we first consider what the size of spending cuts would need to be if no new additional taxes were imposed. We find that in order to pay for M4A with the same spending cuts across all existing Federal programs, these cuts would need to be 53 percent across the board in 2022. In other words, without additional taxes, all other programs of the Federal government would need to be cut by more than half. This would imply cuts to Social Security of about $0.7 trillion, to (the existing part of) Medicare of about $0.4 trillion, and to the Department of Defense's budget of about $0.4 trillion.

If these cuts were made outside Medicare, 79 percent of Social Security would need to be cut, of about $1.0 trillion per year; and for the Department of Defense, of about $0.6 trillion per year. Excluding Social Security from the cuts would require cuts to Medicare of 74 percent, or about $0.6 trillion per year, and to the Department of Defense, about $0.6 trillion per year.

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[85] National Health Expenditure Accounts projections, tables 1 and 3. These expenses include spending by government employees and premiums for their health plans. Here we assume that governments compete for workers with the private sector, where workers are compensated according to their marginal product. Holding constant, for the moment, the amount and allocation of labor, untying health insurance from employment means that both private and government workers receive the same compensation, but more of it in cash. In effect, the Federal government ends up spending more on Federal employees because their compensation is the same; but additionally, these employees are among those drawing on Medicare.
[86] Assuming that 17 percent of GDP is investment, that puts private purchases at 11.7 percent of consumption (public and private consumption combined). The CEA has not yet considered the even large amount of Federal health spending that would occur if the most comprehensive list of covered services were adopted in reconciling the Senate and House M4A bills.

It has been argued that the population would be no worse off financing M4A solely with taxes because these new taxes would simply replace the cost of premiums paid to private sector insurers. This argument ignores that taxation distorts economic activity and that therefore the cost of tax revenues are larger than the revenues themselves, the so-called excess burden or deadweight loss of taxes in excess of the revenues. To illustrate, if the government imposed a per-passenger tax of $1 million on air travel, it would collect virtually no revenue because no one would fly, but it would impose a large burden on the population in excess of the revenue collected by replacing air travel with cars and other types of ground transportation. The existing empirical literature finds that this burden is about 50 cents on the dollar, so that the cost of collecting the taxes to fund M4A in a year is about 1.5 times the additional revenue needed to fund the larger program (Feldstein 1999; Saez, Slemrod, and Giertz 2012; Weber 2014).[87]

Between the two extreme funding scenarios, funding M4A entirely by cuts in spending or entirely by tax increases, lies a middle ground of using both spending cuts and tax increases in combination. This was indeed the observed path for the most recent Federal healthcare expansion in the U.S., through the ACA. The Congressional Budget Office (CBO) estimated that this program was about evenly funded by tax increases and by spending cuts to Medicare and Medicaid (CBO 2009).[88] Indeed, for a program as large as proposed, it is unclear whether sufficient tax revenue can feasibly be collected in the presence of tax avoidance behavior, particularly by the higher-income populations that provide the largest share of total Federal tax revenues. If the amount of maximum revenue collected, the height of the so-called Laffer curve, is below what is required in new funding, then spending cuts are required, regardless of whether lawmakers would prefer to finance the entire program with taxes.

Implications for the Value of the Program and Health Outcomes

The second issue with socialized medicine concerns the quality or productivity of the program in translating the tax revenue collected into value to beneficiaries. This value is partly but not fully measured in terms of the population's improved health, because the population may not value the health or healthcare provided as much as is spent on it—a general concern for in-kind programs such as healthcare. To illustrate, according to CMS, in 2016 about $7,565 was spent per Medicaid beneficiary (Kless, Wolfe, and Curtis 2017). If Medicaid beneficiaries were given

[87] The excess burden rate is larger, and potentially infinite, when considering particularly large increases in revenue, as with M4A.

[88] It is sometimes said that the ACA increased the Medicare insolvency date, which is another way of saying that part of the ACA's funding came from a combination of Medicare tax increases and Medicare spending cuts. It is also asserted that the ACA cut Medicare provider payment rates without cutting benefits but that ignores, among other things, the fact that Medicare Advantage plans offer nonrequired benefits and would cut them if payments were insufficient.

this spending to allocate as they see best, it is unlikely they would spend it all on health insurance. The problem ultimately comes back to inefficiencies of spending other people's money on other people; here, CMS is spending tax dollars on beneficiaries.

We consider the impact on healthcare for and the overall health of the current Medicare population above age 65, which under both spending cuts and tax increases are likely to be adversely affected. In expanding the size of the eligible population of the program, those who are currently eligible are unlikely to benefit. The evidence for a trade-off between universal and senior healthcare is supported by both the European single-payer experience that limits care for the elderly compared with the U.S., as well as the recent domestic U.S. reforms in terms of the ACA that cut Medicare spending by $802 billion to help fund expansions for younger age groups (CBO 2015).

M4A would replace an existing system of financing. The existing system has private insurance as well as insurance for the lower-income households, with essentially zero deductibles, in the Medicaid program. It also has Medicare for the elderly, and the ACA for the nonelderly who are ineligible for Medicaid. It also has uncompensated emergency care, given that hospitals are banned from turning away emergency care. Therefore, changing the financing of health leaves little room to improve health among U.S. citizens. Yes, the current system has some non-Medicaid eligible citizens who are uninsured, but by all estimates they are healthy people, which is why they choose not to purchase an ACA plan (CBO 2017).

Under the existing system, the primary financial limits on healthcare utilization are copayments and deductibles, which are put in place to keep premiums affordable by limiting overconsumption of free healthcare at the time of service. M4A would eliminate copayments and deductibles for everyone. Holding fixed the aggregate supply of healthcare, M4A thereby reduces health and longevity by reallocating healthcare from high-value uses to low-value ones. In addition, M4A reduces the aggregate supply of healthcare by reducing payments to providers, by discouraging innovation, and by using a centralized bureaucracy to allocate resources.

We illustrate the evidence for the relationship between single-payer programs, healthcare, and health outcomes, including short-run effects, assuming that it has no impact on medical innovation, as well as long-run effects that incorporate changes in incentives for innovation and the resulting impact on future health.

Cross-country evidence on the effects of universal healthcare on elderly healthcare and health outcomes. Proponents of M4A often refer to European-style programs of socialized medicine as their role model, but the European programs appear to deliver less healthcare to the elderly and result in worse health outcomes for them.[89] There is well-documented evidence that insufficient reimbursements to suppliers leads to a rationing of care, for example, through waiting times. For instance, there is age discrimination in coverage for certain procedures (Cullis, Jones, and Propper 2000). Such age discrimination in coverage occurs because there is no competition between plans under a monopoly. If there were, presumably plans would emerge that offered the care not covered by the government monopoly.

More systematic evidence has been documented about the elderly's worse health outcomes in Europe compared with the United States. In 1960—before Medicare—the U.S. ranked below most EU countries for longevity among those age 50–74, yet above them among those age 75 and higher. Ho and Preston (2010) have documented that the U.S. outperforms many European countries in the longevity of individuals age 75 and higher. They argue that the U.S. healthcare system is performing especially well for older patients through better diagnosis and treatment of diseases of older people.

Recent evidence has suggested that healthcare is an important determinant for these longevity differences in cancer care in particular. Cancer is the leading cause of death in many developed countries, especially among older individuals, and an important component of overall U.S. healthcare. Philipson and others (2012) found that U.S. cancer patients live longer than cancer patients in 10 countries that belong to the European Union, after the same diagnosis, due to the additional spending on higher-quality cancer care in the U.S. Figure 9 shows the results for life expectancy after diagnosis.[90]

Figure 9's disease-specific evidence is more informative of the benefits of health care than often-discussed cross-country comparisons of nationally aggregated outcomes, such as overall population longevity and aggregate health care spending. There are many determinants of overall population health other than healthcare—such as diet, exercise, genes, and violence—that differ across countries. These factors may be more prone to lead to lower U.S. longevity even while U.S. healthcare is of higher quality. The fact that U.S. exports specialized care to many foreigners that can afford to come to the U.S. to receive it is perhaps the strongest indication of its superior quality. The general pattern of medical tourism is that the United States exports high-quality care while importing low-cost care (Woodman 2015).

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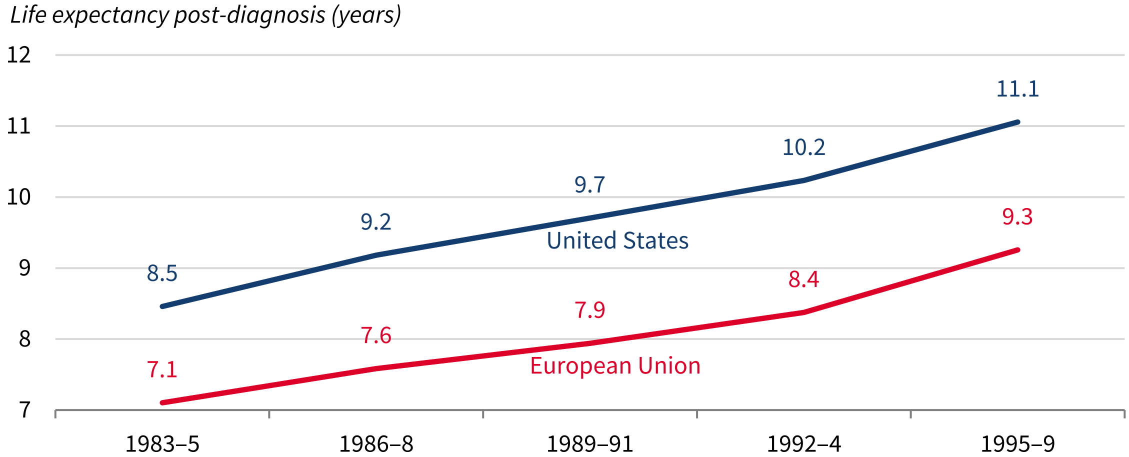
[89] Note that a number of European countries—such as Belgium, Germany, and Switzerland—have universal healthcare without having a single-payer system.

[90] Between the two continents, difference not attributable to a different propensity to screen for cancer in the U.S.

Figure 9. Trends in Average Survival from a Cancer Diagnosis in the United States and 10 European Countries



Source: Philipson et al. (2012).
Note: Results are standardized by age, gender, and cancer site. Includes EU countries for which survival data were consistently available over the analysis period: Finland, France, Germany, Iceland, Norway, Slovakia, Slovenia, Scotland, Sweden, and Wales.

A U.S. single-payer system would have adverse long-run effects on global health through reduced innovation. There is much theoretical and empirical economic analysis concluding that lowering prices for innovative industries often has short-run benefits that are dominated by long-run costs. Lowering prices by having a single payer for innovative healthcare technologies is analogous to reducing patent lives, for both reduce the return to medical research-and-development (R&D) investments. Both have short-term benefits lowering prices for *existing* technologies, but at the cost of reducing the flow of *new* technologies that ultimately lower the real price of health.

Existing evidence suggests that innovation has been valuable in healthcare, in the sense that the health generated by innovation exceeded its additional costs (Cutler 2004). Put more simply, if a health plan offered the lower premiums and quality of care of the 1970s, it would likely not pass the market test. Because world innovation relies so heavily on the U.S. market to support it, adopting an M4A program would likely adversely affect innovation because the world market for new innovations would shrink. A large body of literature looks at the effects of market size on innovation. For example, using the passage of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 as a source of variation, Blume-Kohout and Sood (2013) find an elasticity with respect to market size of between 2.4 to 4.7 for Phase 1 clinical trials. These estimates are well within the range of the work of Acemoglu and Linn (2004), who find an elasticity of 3.5 for approved new molecular entities. Moreover, these results are consistent with evidence on the impact of public policy on market size.[91] Although these long-run effects on a reduced pace of innovation are more difficult to quantify, they may well be more important than the short-run effects of spending less on elder care.

U.S. patients and taxpayers alike have financed the returns on R&D investments to innovators. Unlike other developed countries with single-payer systems, which nearly all impose some sort of price controls, the U.S. market is less financed by the public sector and more open to market forces. In a free market, prices of products reflect their value as opposed to prices in government-controlled markets, which reflect political trade-offs. Among the OECD member nations, more than 70 percent of patented pharmaceutical profits come from sales to U.S. patients, even though the United States only represents 34 percent of the OECD's GDP at purchasing power parity (CEA 2018b).

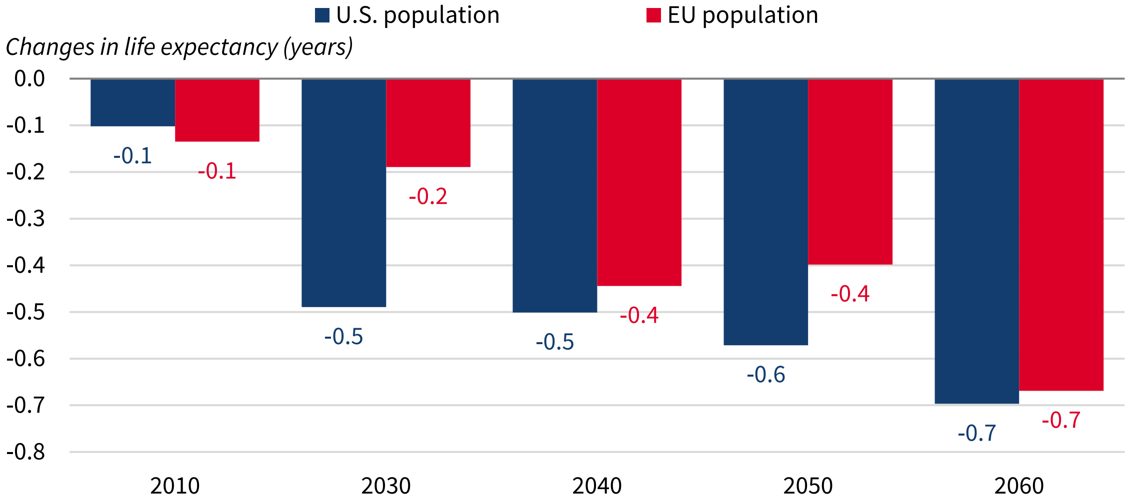
Take the case of pharmaceutical innovation to improve patient health. Empirical research in this industry and others has shown that R&D investments are positively related to market size. For the case of medical innovation, evidence suggests that a 1 percent reduction in market size reduces innovation—defined as the number of new drugs launched—by as much as 4 percent (Acemoglu and Linn 2004).

Given that future profitability drives investment in this way, Lakdawalla and others (2009) examined the impact on medical innovation of the U.S. adopting European-style price controls. The study examined patients over the age of 55 and considered the reduction in R&D and new drugs approved that these price controls would cause. The paper examined increases in mortality for the heart disease, hypertension, diabetes, cancer, lung disease, stroke, and mental illness. The major finding is displayed in figure 10. Given that innovations are financed by world returns mostly earned in the U.S., the mortality effects on health were substantial both in the U.S. and in Europe.

If M4A would entail the same experience with below-market prices as other countries with socialized medicine, it would reduce the world market size and thereby medical innovation, and ultimately mean that future patients would forgo the health gains that would have come from these forgone innovations.

[91] For example, Finkelstein (2004) finds a 2.5-fold increase in the number of new vaccine clinical trials for affected diseases following the adoption of three public health policies aimed at raising vaccination rates, and Yin (2008) finds that the introduction of the Orphan Drug Act raised the flow of new clinical trials for rare diseases by 182 percent in the three years following the passage of the policy.

Figure 10. Effect of U.S. Drug Price Controls on Global Longevity, Among Those Age 55–59 Years in the United States and Europe, 2010–60



Source: Lakdawalla et al. (2009).

Economies of scale in insurance. Many observers argue that a major benefit to adopting single-payer healthcare is that the costs of producing health insurance by a state monopoly would be lower than under competition. The evidence on this comes from a body of literature on so-called administrative costs of health insurance that do not directly go toward paying for care for beneficiaries. In order to hold regulation constant, Sood and others (2008) analyzed administrative costs within a single U.S. State, California. They considered administrative costs and profit levels as the residual of the premium revenue spent on health care to beneficiaries. They found that in 2006, profit levels of private plans were significantly below the average for all Standard & Poor's 500 companies (5 vs. 7.5 percent), which, given the existence of government plans, makes profits only 2 or 3 percent of overall health spending. Sood and others further found that private plans spend about 12 percent on administrative costs, whereas Medicare costs were 5 percent plus the administrative costs of intermediaries that collect premiums and process Medicare claims.

As discussed by Philipson (2013), the focus on administrative costs omits other important costs, and forgone opportunities, of the state monopoly approach. Under a government monopoly health insurer, the plan is financed with taxes rather than voluntarily paid premiums. As previously discussed, the economic cost of taxes is not merely the revenue that arrives in the Treasury but also the distortions of household and business decisions induced by taxes. This applies to administrative costs as well so that $1.00 in administrative costs in the private sector is equivalent to about $1.50 in administrative costs in the public sector.

In addition, this argument ignores the vital role that private "administrative" expenses—such as marketing, profits, and utilization controls—play in driving competition and innovation in the marketplace. Administrative costs also help prevent fraud, which is estimated to be about 10 percent of Medicare and Medicaid spending.[92] That is, by having low administrative costs, CMS does not minimize fraud, which raises the total cost of the programs.[93] In addition, private plans reduce overall costs by aggressively reviewing healthcare utilization under the plan. As a result of competition among plans, lower overall costs are passed on to consumers as lower premiums, even though a greater percentage of those costs may be administrative. In contrast, a public program does not engage in premium competition. Fraud and a lack of utilization controls are natural consequences of the fact that the public program is "spending other people's money" (as explained in the second section of this report). Beneficiaries, workers, and shareholders of private plans would not tolerate the higher premiums or lower wages or dividends that would be the result of lax utilization controls or high levels of fraud.

The apparent efficiency of CMS compared with private insurers may also simply be a product of inadequate accounting. Medicare's *per-enrollee* administrative costs are close to those of private insurers. Sood and others (2008) find that Medicare spends $471 per enrollee on administrative costs, close to the $493 in for-profit plans, and actually above the $427 spent across all California health plans. Medicare's administrative costs as a share of medical spending are smaller only because medical spending is higher for the 65-plus population in the program compared with the population below 65 that is privately insured. Last, part of the difference in administrative spending between private insurers and CMS is due to State premium taxes paid by private insurers, from which CMS is exempt.

Healthcare providers, as distinct from health plans, spend significant time and resources on administrative costs (Woolhandler, Campbell, and Himmelstein 2003; Himmelstein 2014). Some of these costs serve the economic functions noted above, such as controlling fraud and overutilization; but others are specifically related to billing. It is asserted (e.g., by Weisbart 2012) that a single-payer system would eliminate many billing-related expenses, but these savings may not materialize, given that the Federal payer will be issuing new regulations as it attempts to deal with the myriad of different circumstances that can arise among the 325 million people who would be on the single government plan.

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[92] The GA0 (2017, 2018) reports that in 2016, CMS found that the improper payment rate was 11 percent (about $41 billion) for Medicare and 10.5 percent (about $36 billion) for Medicaid. Not surprisingly, underpayments account for only a small share (1 percent) of improper payments, the rest being overpayments. The Medicaid Fraud Control Unit reports (Murrin 2018) that over the last five years, fraud has accounted for nearly 75 percent of all its convictions.

[93] The CEA notes that whether fraud is a social cost depends on how the fraud "industry" is organized.

If the government can lower costs by eliminating profits and marketing without hurting quality or innovation, the question then arises as to why policymakers and voters would not want to socialize many other sectors and have the government run most of the economy. Not even current socialists in the U.S. are proposing socialism on such a scale. The question therefore arises, what is unique about health care that makes a government monopolist more efficient in this sector? In many other industries, economists have generally found that production costs under a monopoly are larger than with competition. Monopolies that are owned in whole or in part by the government incur higher costs than private corporations that operate competitively. The seminal research by Boardman and Vining (1989) found robust evidence that state-owned and mixed enterprises are less efficient than private corporations. More recent work has examined the inefficiencies and higher costs incurred by public monopolies in the education and corrections sectors (Hoxby 2014; Gaes 2008). Once these factors are taken into account, Medicare's efficiency advantage becomes illusory, even if abnormal profits and marketing were to be eliminated from the private sector.

The lower quality of socialized medicine, in terms of reduced availability. Beyond the evidence on health outcomes discussed above, a major quality attribute of healthcare is how long one must wait to be cared for. The highest-quality care may be ineffective if there are delays in diagnosis or treatment. For example, delays to diagnose or treat cancer may cause it to spread to a point where treatment will not work, so even if a country had great cancer care, it could have bad outcomes in terms of cancer mortality if diagnoses or treatment was delayed. This major dimension of quality of care may fall with government expansions of care as they generate excess demand, and thereby may induce queues with waiting times to access that care. Although expansions may expand access to care, if there is a queue for this care, it may not be as valuable.

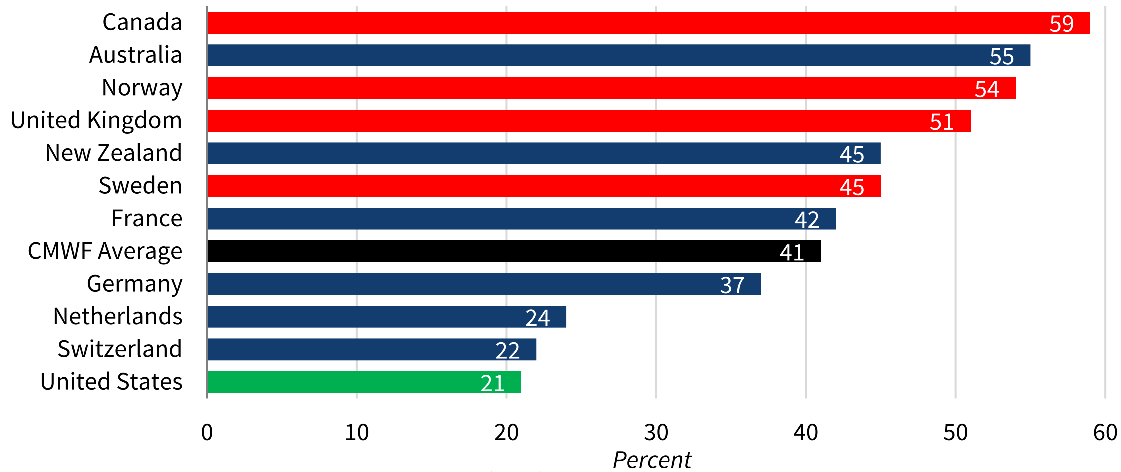
Because it is "free" at the time of service, the single-payer, universal-coverage system gives consumers more reason to consume healthcare (Arrow 1963; Pauly 1968). Also, in the case that it cuts provider reimbursement rates, a single-payer system gives the healthcare industry less reason to supply it.[94] Something has to determine who gets the scarce provider resources, and quality degradation is the typical way that markets make such a determination when prices are unable to (Mulligan and Tsui 2016). The quality degradation may take the form of shorter appointment times, longer patient travel times, or longer waiting times to receive care.

Waiting times to visit healthcare specialists for seniors are low in the U.S. compared with other countries, especially those with a single-payer system. Figure 11 shows the results of a survey conducted by the Commonwealth Fund, with single-payer countries shown in red. In 2017, 59 percent of seniors in Canada waited at least four weeks to see a specialist during the past two

[94] M4A reduces payments to providers (subtitle B of Title VI of the Senate Medicare for All Act of 2017).

years. Sweden and Norway had rates of 45 and 54 percent, respectively. Among the 11 countries analyzed by the survey, the United States had the lowest share, at 21 percent.

Figure 11. Seniors Who Waited at Least Four Weeks to See a Specialist during the Past Two Years, 2017



Source: Canadian Institute for Health Information (2018).
Note: Single-payer systems are shown in red, as compiled by Ghanta (2013) from World Health Organization sources. CMWF Average refers to the average of the 11 countries in the Commonwealth Fund survey. Results exclude respondents who never attempted to get an appointment.

Indeed, one does not need to go abroad to see differences in the intended versus actual outcomes of socialized medicine. The Veterans Administration (VA) is publicly funded and usually offered only publicly provided care to military veterans, until it was recently reformed by the Choice Act to give them greater access to private providers.[95] The VA health system had been plagued by some of the same problems as socialized regimes abroad, such as delays in treatment, which forced veterans to wait for necessary medical care.

Effects on Overall Economic Activity

Here we use an extension of the neoclassical growth model to estimate (a) the tax rate increase required to finance M4A entirely with taxes on labor income, and (b) the long-run equilibrium GDP associated with the higher tax rate.[96] The model is extended to have three goods and calibrated to fit the GDP, private health spending, and all other spending in the baseline situation of no M4A. The baseline economy has a 48 percent average marginal tax rate on labor income, which reflects the combination of various payroll, income, and sales taxes that are currently in place in the U.S., including implicit taxes on employment and income. Private

[95] For more information on the Choice Act, see https://www.va.gov/opa/choiceact/documents/choice-act-summary.pdf.

[96] The long-run GDP effects would be of greater magnitude if partially financed with capital-income taxes.

health spending is assumed to be exempt from labor income taxation, which is an approximation of the current situation in which employer-sponsored insurance premiums are exempt.

This model is then used to simulate the effect of raising the tax rate across the board enough so that government revenue is sufficient to pay for all of healthcare (as noted at the beginning of this section, about $18,000 additional taxation per household in 2022) without cutting any other government programs. Although a significant amount of tax revenue and a significant reduction in disposable income are obtained by broadening the tax base (private health spending may be legally deductible under M4A, but its amount is assumed to be zero), the rate must still increase by 14 percentage points across the board in order for the Federal government to have enough revenue to pay for the Nation's health expenditures.[97]

As a measure of the average incentive to work, the average after-tax share kept by households at the margin is reduced by 27 percent due to the higher tax rate. National income and GDP are thereby reduced by 9 percent in the long run, as illustrated in table 7, where national income falls from 100 to 91.0.[98] In 2022, for example, 9 percent of GDP is expected to be about $7,000 per person, or $17,000 per household. Although private health expenditures are eliminated, the amount of income that the private sector has after taxes and health expenditures still falls by 19 percent (about $17,000 per household in 2022) because the tax rate is higher and M4A removes a major tax exclusion. In other words, M4A is not just a swap of taxes for private health spending. Moving health spending onto the Federal budget reduces the private sector so much that households are spending 19 percent less on nonhealth items than they would be without M4A. From a national perspective, healthcare is a lot more expensive with M4A than it is without it, because households not only need to pay for healthcare through taxes but also the economy is smaller.

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[97] The CEA is working on a more detailed macroeconomic model that recognizes that (a) the health-insurance tax exclusion is in effect a negative tax on employment because it is tied to employment, (b) the ACA is a positive tax on employment (Mulligan 2015), and (c) that government health spending is of a different quality than private spending. Both a and b are eliminated by M4A. In order to be conservative about the economic harm of M4A, the model used in this report assumes that M4A financing includes substantial broadening of the tax base. Without base broadening, it is unclear whether the economy would be capable of generating the tax revenue needed by M4A.

[98] As a comparison with the 9 percent, consider the fourth section's cross-country finding that changing the U.S. policies to those of the Nordic countries when they were at peak socialism would reduce long-run GDP by at least 19 percent. In other words, the 9 percent effect of M4A is about half the effect of peak Nordic socialism.

The Mercatus Center at George Mason University calculated the cost of M4A from a Federal accounting perspective as $32 trillion over 10 years (Blahous 2018). This is their version of the CEA's 11.3 addition (34 percent increase, or about $18,000 per household in 2022) to tax payments shown in table 7's second row. Proponents of M4A point out that there is a benefit helping to offset the $32 trillion, which is true but incomplete. In the CEA's framework, the offsetting benefit is the reduction in private health spending of 9.5, shown in table 7's third row measured on a scale with baseline national income equal to 100. But the economics of socialism points to additional effects, one of which is also shown in table 7's first row: there is less national income and therefore substantially less to spend on nonhealth goods and services.[99] The national income opportunity cost is similar in magnitude to, *but not included in*, Mercatus' Federal accounting cost estimate or the CEA's tax increase estimate. The Mercatus study did not consider any reduction in national income, which we estimate to be about $20 trillion over 10 years as a result of M4A.[100]

Table 7. The National Accounts With and Without "Medicare for All"

	Without M4A	With M4A	Impact
National income	100	91	-9%
Taxes	33.0	44.3	34%
Private health spending	9.5	0.0	-100%
Taxes and health spending	42.5	44.3	4%
National income – Taxes – Private health	**57.5**	**46.7**	**-19%**
Disposable national income	67.0	46.7	-30%

Sources: Bureau of Economic Analysis; CEA calculations.

Note: M4A is financed entirely with taxes. National income without M4A is normalized to 100.

[99] The other cost is the loss of quality of the health spending when it is shifted from private to public, as discussed in the previous subsection.

[100] The loss of national income is not fully a cost because of the offsetting savings on using less labor and capital in the economy. At the same time, the factor savings are not a full offset because factor incomes are subject to large tax rates, thereby generating a large gap between the social and private values of factor supplies.

Conclusions

This report has examined socialism's historic and current visions and intents, its economic features, its impact on economic performance, and its relationship with recent policy proposals in the United States. A large body of evidence shows how the high tax rates, state monopolies, and centralized control of socialism disincentivize effort and innovation and substantially reduce the quantity and quality of a nation's output. This evidence includes before/after estimates of the consequences of nationalizing agriculture, and later privatizing it; commentary and interpretation from survivors of highly socialist policies; before/after estimates of the effects of a socialist takeover of the oil industry; cross-country relationships between economic freedom, GDP per worker, and other macroeconomic variables; comparisons of the rates of return between "free" and tuition-paid colleges; comparisons of conditional mortality between the U.S. and single-payer countries; and application of a broad body of economic literature on the effects of raising tax rates.

An open question for socialists is whether they recommend reducing living standards for poor and middle-income families if it serves the purpose of making the top 1 percent—or the bourgeoisie, or the kulaks, or the landlords, or the giant corporations—worse off too. Centralized state controls and high tax rates historically delivered such results. The Nordic countries abandoned this approach, backing down from high tax rates and finding ways to enhance consumer choice and market competition. Even Cuba, China, the USSR, and other highly socialist countries eventually permitted private enterprises both in and outside the agriculture sector to coexist with the state-owned enterprises. With the exceptions of Cuba, North Korea, and Venezuela, all the highly socialist countries eventually transitioned to primarily private economies.

Despite this evidence, current socialists argue that U.S. tax rates are not nearly high enough on capital income and on top personal incomes, even though these rates are already near or above what they are in the Nordic countries. With health insurance, to name one of the major industries in the U.S. economy, socialists promise great results if only the state is granted a monopoly and its goods and services are distributed free of charge. Such a state enterprise would be far larger and more centralized than any the Nordic countries have ever seen. This is where the experiences of Cuba, China, the USSR, and other highly socialist countries are relevant and worth remembering.

The China scholar Peter Nolan (1988, 4) once advocated socialism—until he observed the results. He explains that "errors of all kinds have been made in the socialist countries' rural policies, but . . . none has been so important as the misplaced belief in the virtues of large-scale . . . units of production." He adds that "stimulating the productive forces, and, consequently, the possibilities for human self-fulfillment, in a poor peasant economy (indeed, in any economy) requires harnessing . . . market competition."

The CEA does not expect that socialist policies would cause food shortages in the United States, because socialists are no longer proposing to nationalize food production. Rather, the historical experience with agriculture is relevant because it involved economic disincentives, central planning, and a state monopoly over a sector that was large when socialism was introduced—similar to healthcare today. The historical evidence suggests that the socialist program for the U.S. would make shortages, or otherwise degrade quality, of whatever product or service is put under a public monopoly. The pace of innovation would slow, and living standards generally would be lower. These are the opportunity costs of socialism from a modern American perspective.

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