

The Role of Economists in Economic Policymaking

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It an honor to deliver the Arnold C. Harberger Distinguished Lecture on Economic Development and I am happy to be at the UCLA Burkle Center for International Relations. Harberger has had a long and distinguished career that helped to develop critical ideas that we use on a daily basis when thinking about questions ranging from reforming the tax code to developing regulations to address climate change to international macroeconomic issues. Throughout his career Harberger has also played a major role in turning these insights into more practical policy advice.

I want to use this lecture as an opportunity to explain how I came to economic policy as a profession, why I find it so exciting, and how to use economics to address questions we know the answer to—and more commonly, how we use economics to address questions we do not already know the answer to, and how to think about policies that affect growth and inequality. In all of these cases I will draw heavily on issues that I worked on in the Obama Administration.

How I Came to Economic Policy

I have spent the last 21 years of my life analyzing, designing, and implementing economic policies. But I got here by accident. I was in graduate school in economics following the normal course of research, looking forward to the job market and a purely academic career. I had never worked in Washington and had spent more time studying textbooks on topology (which comes up in one branch of welfare economics) than I had attending discussions at the Harvard Kennedy School (soon to be my employer).

Then, at my advisor's recommendation, Joe Stiglitz cold called me to interview me for a one-year job at the White House on the Council of Economic Advisers (CEA). Joe's interview consisted of him talking for thirty minutes straight about all of the exciting topics that CEA was working on at the end of which he told me I was hired. The interview excited me. I was even more excited about the chance to follow a woman I really liked to Washington, hoping that I might be more successful than my futile efforts to attract her interest in Cambridge. So I took the job. And, I should add, I eventually married the woman.

I ended up loving my work at CEA. So, against the sensible advice of my advisor Greg Mankiw, I spent a second year in Washington—following Joe to the World Bank. Then I returned to the

White House to work at the National Economic Council (NEC). NEC's job is to coordinate the economic policymaking and implementation process, playing a more strategic role than CEA which is staffed by professional economists and focuses on more pure economic advice. After NEC, I worked on Al Gore's Presidential campaign and probably only returned to graduate school because he lost. I remember Greg telling me this was the first of many good things George W. Bush would do for education.

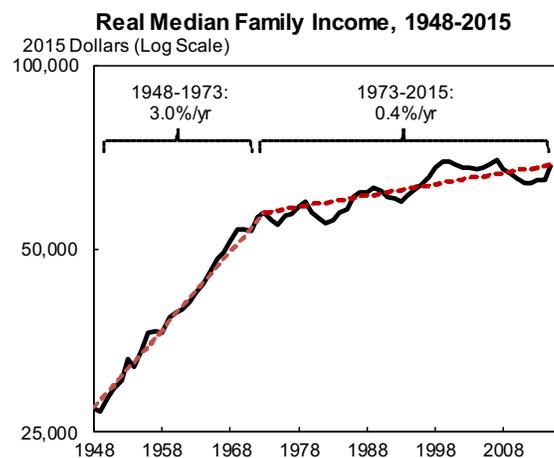
After finishing my Ph.D. I did a range of policy-oriented research at think tanks and held additional policy roles in government, including working all eight years in the Obama Administration—roughly the first half of them as Deputy Director of the National Economic Council and the second half of them as Chairman of the Council of Economic Advisers. And now I am back engaged in economic policy research at a think tank in DC, the Peterson Institute for International Economics, and am moving this summer to teach at the Harvard Kennedy School.

Why Is Economic Policy So Exciting?

I have worked on economic policy longer than the one year I had originally planned on, for twenty years and counting. In retrospect I can identify a number of reasons for this. One is that I am excited about the wide-range of issues that you can address, and hopefully make a difference on, using economic policymaking.

One of those big issues is the growth of middle class households. In this regard, the United States faces a serious challenge. From 1948 to 1973, the typical family saw its income rise by about 3 percent annually, enough to double real incomes every twenty-four years, which is roughly every generation, as shown in Figure 1. Since 1973, however, median family income has only grown at a 0.4 percent annual rate, requiring about 150 years to double—a huge difference. Economics can help us understand why this has happened and what to do about it, something I will come back to in a moment.

Figure 1. One of the Bigger Challenges for Economic Policy



While I have always been happy to make even a small contribution to a big issue like this, I am also happy when I have a chance to make a bigger contribution to what might be a “smaller” issue that still impacts people’s economic wellbeing. These issues may not always make the headlines and can be a bit technical and detailed sometimes, but they have direct tangible impacts on Americans’ lives and often contribute to making progress on the bigger policy questions. An example I will return to later in this talk is how to free up more scarce electromagnetic spectrum so that mobile broadband operates effectively on our phones, tablets, and other devices.

In the Obama Administration I worked on everything from helping to prevent a second Great Depression to restructuring the post office—although I confess that we were only successful on one of these. Many of the topics I worked on are standard fare for economics, like the minimum wage, international trade, or environmental regulation. Others might be topics you do not associate with economists, like criminal justice reform, immigration, and sanctions. And on none of these did economists fully get their way which, *ceteris paribus*, is a good thing—which brings me to the next reason I like economic policy.

The second reason I like economic policy is that in important respects it is more challenging than pure economics or pure politics. One of the challenges of economic policy is that it involves combining economics with a broader understanding of how to make policy work, whether politically, administratively, or otherwise.

When looking at any of the issues above, if you want a pure economic answer, you should survey ten economists. If they all agree, there is a good chance that they are right. Take climate change for example. I suspect ten out of ten economists would tell you that the right solution is a carbon tax to reflect the externalities that are imposed on other people and on society more broadly when a person chooses to create carbon emissions. If you want a pure political answer, that is also easy: just survey a random sample of a thousand people and they might tell you that the key is for everyone to have energy efficient homes.

If you were a philosopher-king, the economists’ answer would be all you need. Someone only focused on political popularity would only need to know the response to the public poll. What makes economic policy exciting is that you have to figure out how to combine economic knowledge and political feasibility. I can think of three general ways this is done. First, using economists to figure out the best policy and political analysis to figure out how to frame and communicate it—in this case, maybe by calling it a “future fee” instead of a “carbon tax.” Second, by packaging together a set of policies that address various concerns or political impediments. An example of this is a recent proposal by leading conservative thinkers to combine a carbon tax with a cash rebate to households, a repeal of carbon regulations, and a tax on imported carbon. Finally, and unfortunately the most common way of combining economics and politics is to seek the *n*th best solution—and then hope that *n* is not so high so as to undermine the point of undertaking the policy in the first place.

One example of this from my own experience early in the Obama Administration. In the Recovery Act—which we passed in the beginning of 2009 to deal with the financial crisis and the Great Recession that followed—we included a tax credit called Making Work Pay. Making

Work Pay provided \$400 for a single tax-filer, and \$800 for a married couple. It was designed as a so-called “refundable tax credit,” so low-income households would get a check if necessary, and it was phased out so higher-income households would not receive it. We thought this was a really well-designed component of a broader response to the economic crisis. Our goal was to rapidly put money in the pockets of the households most likely to spend it while not wasting resources on higher-income households who would be both less likely to spend it and also less likely to substantially benefit from it.

We originally passed Making Work Pay for two years, but as we got closer to its expiration at the end of 2010 it was clear to us that the economy—and hard-pressed households—still needed support. But Republicans in Congress were completely opposed to continuing Making Work Pay. In particular, they did not like the refundability of the credit—the fact that you would mail checks to people whose tax refund was higher than their tax liability—arguing that this would lead to fraud.

One approach would have been to stick to the pure economics and just repeat over and over again why we thought extending Making Work Pay was a good idea. The alternative, though, was to figure out if there is something else that would accomplish much of the same goal but did not have the particular problem that led Republicans to oppose the credit. We thought of the payroll tax, something that everyone working pays—even if you earn only \$1, a portion of your paycheck goes to the payroll tax. Rather than give people a check, as we did with Making Work Pay, why not give people money off of their payroll taxes temporarily? This would get the money out rapidly, and it would get money to everyone no matter how low their earnings. However, it did have the unfortunate feature of providing more to higher earners—with no phaseout as individuals’ earnings increased.

For the sake of argument, let me assume that the President’s economic team was able to tell the President that he had three choices: Making Work Pay with refunds for low-income households which I will define as having a degree of effectiveness of 100, Making Work Pay without refunds for low-income households which I will define as having a degree of effectiveness of 30, and finally a payroll tax cut which I will define as having a degree of effectiveness of 80—all of which are illustrated in Table 1. The job of an economist in government is to help develop these choices and make sure the President has the best information on their merits. But a political advisor might point out that the respective odds of passage for these three options was 5 percent, 100 percent, and 80 percent respectively. Multiplying these indicates that the best option might be a payroll tax—which is both reasonably effective and, at the time, reasonably likely to pass. That is the course President Obama chose. It passed and was one of the reasons the aftermath of the Great Recession was less severe in the United States than in Europe.

Table 1. Illustration of How to Combine Policy and Political Analysis

Illustrative Example: Alternative Stimulus Tax Cuts			
	Effectiveness (per economists)	Likelihood (per strategists)	Overall Score
Making Work Pay—Fully Refundable	100	5%	5
Making Work Pay—Not Refundable	30	100%	30
Payroll Tax Cut	80	80%	64

I give that example because it is one of the many ways in which you have to balance legislative affairs, politics, communications, and economics to design a public policy that achieves your goals. Moreover, you need to understand how the tax code actually works and how it is implemented to embed all of this in an administratively feasible framework. That balance works best if you have some awareness of the political constraints in which you are operating. But it is also essential as an economic adviser to present the full set of options and economic tradeoffs, because in this case a different set of legislative probabilities—not something economists have comparative advantage in determining—could have led to a different outcome. While it can be difficult during a policy debate to determine when it makes sense to move forward with a compromise option, it has been helpful to not let a lack of perfection get in the way of progress. Landing on a policy that is 80 percent as effective as your ideal choice can still make a meaningful difference for working Americans.

Do Economists Ever Agree on the Answer?

A number of policy questions have been heavily studied by economics, and economists often have a relatively clear, agreed-upon answer. As I mentioned earlier, climate change is one such area where economists broadly agree on the right policy. Similarly, in macroeconomics there is broad—albeit not universal—agreement that the economy trends towards full employment but can deviate for prolonged periods and that monetary and fiscal policy can expand output in the short run but not in the long run.

Taxes for high-income households are one of the tougher tests of the proposition that economists generally agree, because that is where you see some of the fiercest debates in the political system. In addition, and unfortunately, the economic evidence presented in those debates and the research papers on those issues are highly correlated with whether the presenter is on the Democratic or Republican side of the argument. But even here, I think economics can be helpful in narrowing the debate. While in the newspapers you can read a wide range of opinions about taxes, among professional economists, I do not think you would find any who say that a labor tax cut pays for itself, or even comes close to paying for itself—something that economists like former Senator McCain adviser Doug Holtz-Eakin and the conservative Tax Foundation have

reiterated in the context of President Trump’s proposed tax cut. Nor do I think you would find many economists who would deny that labor taxes have any incentive effects at all or that these effects can be completely disregarded in figuring out the best way to create tax policy.

What Can Economists Contribute When the Answer is Not Known?

For most of the policy issues I have worked on you cannot simply go find a textbook or journal article that will tell you the right policy. They are instead a novel set of issues like the economic impact of sanctions on Russia, how to set the salary threshold for overtime rules, or what quantities to require for different types of biofuels. There are rarely clear-cut answers to the most complicated policy questions, and part of making policy recommendations is being comfortable with a potentially significant level of uncertainty about the impact of different policy options. Even for certain questions that are anything but novel and have been heavily studied, there is rarely a clear answer for what the optimal policy should be. For example, despite study after study of the effects of the minimum wage, it turns out that few if any papers ask the question of what the exact level of a minimum wage should be—which is what policymakers actually need to know.

I want to discuss four ways to proceed in this circumstance with examples for each.

The first is just describing the data. Describing the data does not tell you what caused what. It does not tell you what is the right policy or what is the wrong policy. But it can help you at least figure out what questions you should be asking, what areas you should be looking at to solve those questions, and what you can do about them.

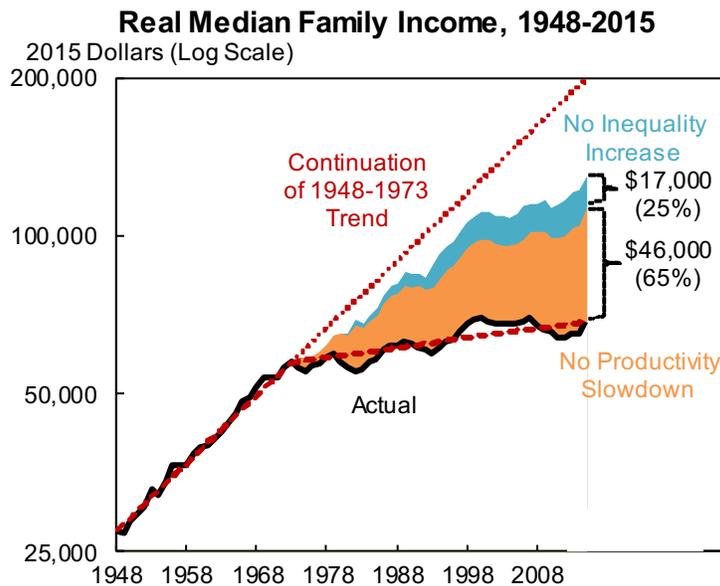
The data can be complicated. The government released two different measures of economic growth in the fourth quarter of 2016, one was 1.0 percent and one as 2.1 percent. The government also released two different measures of job growth in March 2017, 98,000 jobs and 472,000 jobs. Moreover, for the first quarter of this year the data tells a divergent story—with strong employment growth and strong “soft data”, like surveys of confidence, but much weaker GDP growth and weaker “hard data”, like actual sales numbers. I have spent a lot of time on these issues and developed a number of rules of thumb, almost all of which can be summarized by saying that you should look at a wide range of data, ideally smoothed over a longer period of time—without placing too much weight on any given indicator.

Right now these measurement issues are of particular interest to monetary policymakers but are still not overly consequential from a policy debate perspective. But at times they can be much more consequential. When we were in the middle of the Great Recession at the beginning of 2009, we were looking at the official statistics about what was going on in the economy. Our first month in office, the official statistics said that in December the economy lost about 500,000 jobs, and in the fourth quarter of 2008, the economy had contracted at a 3.8 percent annual rate. For us that was a big motivation to act—a big reason to do something as fast as we could and as large as we could. As it turned out, the numbers we were operating on—which were the official data at the time—were wrong. They were not wrong through anyone’s fault, but just because of the difficulty of tracking the economy in real time and especially around rapid turning points in

the business cycle. And when the numbers were subsequently revised, that 500,000 job loss—which felt quite large to us—was revised up to about 700,000 jobs lost in a single month, an eye-poppingly large number. And the contraction in the economy—instead of being 3.8 percent—was actually 8.2 percent, making it part of the largest two-quarter contraction in a half century. So trying to get underneath the data, to put it in context, and to infer what it may or may not be telling you is often as important as reading the data itself.

Data description can be more sophisticated than just looking at single numbers or even trends. Sometimes it helps to decompose a number into its components to identify what is driving it, at least in an arithmetic sense. To go back to the example of median household income I gave at the start, you can decompose the slowdown in growth into the portion attributable to the increase in inequality (holding productivity fixed), the portion due to the increase in productivity (holding inequality fixed), and the interaction between the two. Such a decomposition is shown in Figure 2—and shows that the slowdown of productivity growth since 1973 has been a bigger factor in the slowdown of median family income than the rise of inequality, but that both of them have had a quantitatively large impact. This description, of course, does not explain why all of this happened or what to do about it. But it does help us focus on and prioritize the policy areas that we need to pursue in order to find these answers.

Figure 2. Using Data Description to Pinpoint the Causes of the Slowdown in Median Income Growth



The second set of techniques we use is economic theory. Economic theory can sometimes give you a very helpful answer to a question. One of the biggest insights in economics is that some items are more valuable to one person than to another person, and if those two people trade things, they can both be better off. These are the basic motivations for a market economy and the basis of the argument for expanding international trade.

This insight also has useful implications for some specific questions in public policy. Let me give you one: the example of the allocation of electromagnetic spectrum that I referenced earlier. Spectrum is a scarce resource and in many cases the rights to use it were allocated decades ago. Today, much of the best spectrum is reserved for the exclusive use of television broadcasters while users of smartphones and tablets often face frustrating and economically costly delays in accessing data because of crammed airwaves. In the Los Angeles area, for example, there were more than 25 broadcast stations, some of them with only a handful of viewers, most of whom could watch the shows on cable, online or through other means. A station with only a few thousand viewers might be worth \$5 million, but at the same time may own a license for spectrum that a mobile broadband provider would be willing to buy for \$50 million.

We proposed to deal with this by setting up an incentive auction. Anyone who is a television broadcaster who wants to sell their spectrum can do so, and anyone who is a mobile broadband provider or anything else and wants to buy that spectrum can do so. The auction is entirely voluntary—a station will only sell if it is better off with cash than with spectrum, a mobile broadband provider will only buy if it (and presumably its consumers) benefit more from the spectrum than the cash they pay, and taxpayers get a cut of the difference in the bids to reflect the government's role in organizing the process, including repackaging the spectrum into contiguous blocks to make it more valuable. Economic theory was enough to motivate and support this proposal—which ultimately resulted in \$5 billion for taxpayers as well as profits for television broadcasters, mobile broadband providers, and benefits for their consumers.

This is a simple example. The fact that one person wants to buy something and someone else wants to sell it suggests that the item is more valuable to the buyer and thus the transaction will make them both better off. But a number of assumptions go into this presumption, including perfect rationality, perfect information, and perfect markets. And while these are true enough in much of the economy, including the case of spectrum, they are not true everywhere—and economics itself would be pretty boring if these were the only cases that were studied. Many of the Nobel prizes in economics have been given for understanding not the models that only use those assumptions, but the models that relax those assumptions to understand the consequences of markets departing from the perfection you begin your studies assuming.

One of those assumptions is perfect information. Since at least Kenneth Arrow's pioneering work in the early 1960s, economists have understood that in the case of health care, we do not have perfect information. I know a lot more about my health than my insurance company does. Just like if a used car salesman is really eager to sell you a car, you might infer that there is something wrong with the car, if someone is really eager to sign up for health insurance late one evening, you might infer that they have information you do not know about, for example, that they are undergoing surgery the next morning. This is a problem—a violation of the standard assumption in the standard model of economics that leads to something called adverse selection, where if left to itself, the sickest people would all sign up for health insurance coverage, and coverage would become even more expensive. So even sicker people would show up, and the healthier ones would drop out, and it could lead health insurance markets to not function.

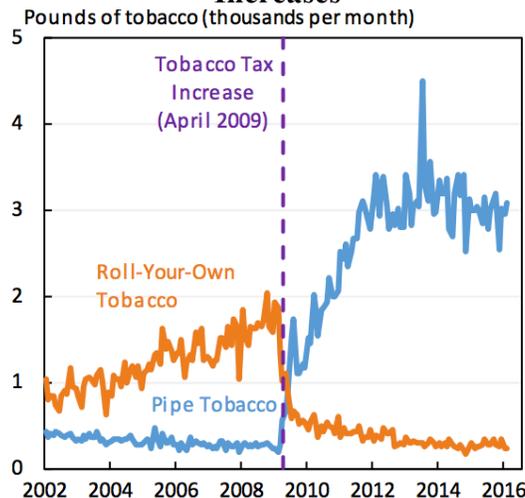
Economists, over time, have had a range of ideas to address adverse selection in health markets. You could argue for a number of different solutions, although the one that I think a variety of

economists have advocated for—including the Heritage Foundation, Governor Romney in Massachusetts, and President Obama—is that there has to be some type of individual responsibility requirement or mandate for purchasing health insurance to help solve this adverse selection problem. That is another example of where thinking about some basic theories—and in this case the way that standard theory can go wrong if you change one of its assumptions—can lend you guidance for public policy.

Health is just one example of how an entire field of research in economics is built out of relaxing and changing standard economic assumptions. In the last two decades, one of the fastest growing areas of economics has been “behavioral economics,” which relaxes the standard assumption that people are fully rational, and instead pays close attention to the ways people can be myopic, make decisions that depend on framing, and have limited attention spans or ability to incorporate information. One of the big successes of labor economics has been getting policy to focus less on the rate of return to savings and more on making it easier and more automatic to save.

The third set of techniques we use is empirical work, trying to understand the causes and effects of different economic phenomena. I want to give you an example of a mistake I was involved in because I did not think hard about causation. At the end of 2008, I was working with Congress on legislation to raise the tax on tobacco products in order to pay for an expansion of the Children’s Health Insurance Program (CHIP). The main proposal was to raise the tax on a pack of cigarettes from \$0.39 per pack to \$1.01 per pack. But we also needed to set tax rates on a wide range of other tobacco products including roll-your-own tobacco, pipe tobacco, small cigars, large cigars, and more. Amidst everything that was going on at the end of 2008 with the Great Recession I did not pay enough attention to this issue, even though I once sat through what felt like an endless meeting on the topic. What came out of that meeting was a proposal to raise the tax rate on roll-your-own tobacco by more than \$20 a pound while leaving the tax rate on pipe tobacco largely unchanged. What followed was a huge decline in the sale of roll-your-own tobacco and a huge increase in the sale of pipe tobacco, as shown in Figure 3.

Figure 3. How Sales of Roll-Your-Own Tobacco and Pipe Tobacco Responded to Tax Increases



It turns out that roll-your-own tobacco and pipe tobacco are highly substitutable—not because people have shifted to smoking pipes, but because you can still put pipe tobacco in a piece of paper, roll it up, and smoke it. This is not just a minor, technical observation. It turns out to be highly consequential for public health. I have estimated that the 2009 tobacco tax increase will reduce the number of premature deaths due to smoking by between 15,000 and 70,000 for each cohort. But it would have reduced them even more if we had harmonized the tax rate on different tobacco products, as we did in a subsequent proposal. In fact, economists in the Treasury Department estimated that the reduction in tobacco consumption under a harmonization proposal would be nearly two and a half times the size it would be under an increase in the cigarette tax alone that raises comparable revenue.

Fourth, we sometimes combine empirical description, theory, and causation to build models that allow us to simulate the impact of different policies. For example, such simulations can tell you how a tax cut will be distributed or affect the economy, how much a particular health plan will cost per person covered, or how much carbon emissions will change as a result of different policy approaches. While any model is limited and imperfect, models can be especially useful in quantifying plausible tradeoffs in designing a policy and communicating the impact of policies to policymakers.

How Should Policymakers Handle Uncertainty?

Describing the data, using theory, using empirical analysis to understand causation, and combining this all together with modelling can all help with formulating the right recommendation for public policy. But even the best economic analysis will not tell us everything we would like to know about the problems that we are trying to solve. As policymakers, we have to be very humble about the limitations of our knowledge and about the uncertainty around our analyses. We do no service to the perception of experts when we make overconfident assertions that turn out to be wrong.

Let me talk about three ways of handling uncertainty with examples for each.

First, to the greatest degree possible, you want to integrate evidence and evaluation into your policy itself, both so that you are learning more and so that you can act on that knowledge. For example, in the case of Unemployment Insurance the Department of Labor performed trials of a low-cost intervention to interview longer-term beneficiaries to establish if they were still eligible and help them find jobs. The resulting evidence was that the benefits of this approach were several multiples of the cost. As a result, in 2012 we worked cooperatively with the Republican House and Democratic Senate to substantially expand the program.

More often, the legislative process is slow and cumbersome, and sometimes trying to build that constant process of innovation, evaluation, and improvement into programs themselves can be very important. One of the exciting innovations in the Affordable Care Act to reform the delivery system of Medicare and Medicaid is something we created called the Center for Medicare and Medicaid Innovation (CMMI). The premise of this center was that we needed to do a lot to change the way hospitals, doctors, and other providers are paid to create more incentives for

integrated, high-quality care but that we did not know exactly how to do it. CMMI was authorized to conduct experiments, for example of bundling payments so that a group of health providers get a single payment for treating a hip or knee problem rather than the traditional practice of making separate payments for the separate treatments required, a system that encourages unnecessary and duplicative care. Under the law, if an experiment is proven to either save money without hurting quality or to improve quality without costing additional money, then the Secretary of Health and Human Services has the authority to scale it up to the full Medicare program.

Second, in many cases uncertainty says we should rely on the market more to figure out the right solutions—but that we need to make sure the market has an incentive to do so. A market failure may lead policymakers to want to push the economy in a certain direction, but we may not know enough about every detail of how to push it there. As a result, uncertainty says that we should give more incentives for the private sector and consumers to figure out the best and most creative answers rather than trying to specify them in detail. We also used this approach in the health sector, passing a “Cadillac Tax” on excessively costly health plans. The idea behind this tax was that rather than telling insurers and providers exactly how to reduce costs we would instead give them the incentive to figure out how to do it. The tax was supposed to go into effect in 2018, was delayed until 2020, and remains controversial among politicians—although the concept has broad support from economists. Similarly, the carbon tax I discussed earlier is another example of giving the private sector an incentive to figure out how to solve society’s problems.

Third, in the face of uncertainty it is better to have policies that can automatically and sensibly respond to contingencies. I talked about how hard it is for economists to track the current state of the macroeconomy, let alone predict it. Moreover, even when we are successful, Congress often acts in a delayed and imperfect manner. One response to that is to make policies more automatic. For example, unemployment insurance benefits could automatically become more generous or last for longer in States that experience very high or rapidly rising unemployment, something we currently do in a very imperfect manner. While the details of this proposal might be debatable, it builds on two ideas that are broadly supported by economists—the first is “automatic stabilizers” as an effective way to reduce business cycle fluctuations and the second is that whatever tradeoffs are inherent in the unemployment insurance system are lessened when the economy is weaker.

Finally, even all of these techniques may not be enough. In some cases, the right response to uncertainty may be that we do not know enough to solve a given problem without risking serious unintended consequences. Unfortunately not every problem has a policy solution.

How Should We Think About Policies That Aim to Raise the Growth Rate?

I want to conclude by offering three personal observations about my broad approach to prioritizing or handling tradeoffs between growth and inequality. Many policy debates entail taking on this issue. For example, advocates of tax cuts for high-income households might argue that they will help everyone through stronger growth. And advocates of a higher minimum wage might acknowledge that it will not raise growth—and might even entail some tradeoffs—but that

it is justified because of the better distribution of income. Ultimately policymakers should be concerned with both increasing growth and also helping to make sure that growth is shared. I have three broad lessons I have drawn on how to do this:

Lesson 1: Advocates overstate the benefits of the policies they like and the costs of the policies they oppose. Consider: Over the last century, Argentina has done just about everything wrong with its economic policies and institutions. It has seen waves of populism, abrogation of the rule of law, massive deficits, multiple defaults, misguided industrial policies, political upheaval, large-scale price controls, corruption, and much more. The result of all of this? A per-capita growth rate that was only 0.7 percentage points lower than that enjoyed by the United States.

Taking a less extreme example, France scores well below the United States on just about every measure of regulation and economic freedom, but its workers produce just as much in an hour as American workers.

Any difference that President Trump could make for U.S. policy, for better or for worse, is much smaller than the differences between the United States and Argentina or even between the United States and France. The next time someone promises that a policy or set of policies will add or subtract, say, 1½ percentage points to the growth rate on a sustained basis you should ask yourself if the policy difference is really twice as large as the difference between Argentina and the United States over the last century.

Lesson 2: All else equal, do everything you can for growth, because over time a few tenths of a percentage point really do matter. At the beginning of the 20th century the United States had GDP per capita that was roughly 50 percent higher than Argentina's. Today it is about three times as high—all because of a 0.7-percentage point difference in annual growth rates. Small differences in growth rates can cumulate to a lot over time—for example, a 0.2-percent increase in the growth rate over a decade is worth about \$1,000 in additional income for the typical family. In fact, as discussed earlier, the largest factor in the slowdown in the growth of median household income since 1973 in the United States has been the concurrent slowdown in productivity growth.

All else equal, we should be doing everything we can to push growth up by even a few tenths a year, for example by investing in infrastructure or sensibly reforming the business tax system. And we should oppose anything that that would lower it even by a few tenths, like drastically restricting immigration or increasing the deficit.

Lesson 3: But it is generally not worth making large distributional or other sacrifices for a little additional growth. The key words in Lesson 2 are “all else equal.” But when all else is not equal, then any benefits of growth may need to be evaluated against tradeoffs in other dimensions—like increased inequality or environmental damage. And with the growth effects of policies often being relatively small they are often insufficient to justify these tradeoffs.

For example, consider the \$1,000 windfall I mentioned that a family gets after a decade when the growth rate increases by 0.2 percentage points a year. That is effectively meaningless if they lose government benefits and services that are worth more than \$1,000. To give a concrete example,

CBO estimated that repealing the Affordable Care Act (ACA) would add a little under 0.1 percentage point to the growth rate (a number I am using for the sake of argument, notwithstanding the fact that it omits many of the positive effects of the ACA on growth). But the added income this would generate after a decade is trivial for tens of millions of households compared to the thousands or even tens of thousands of dollars in higher premiums they would face.

Moreover, a focus on growth, to the exclusion of other factors, overstates the improvements in people's well-being to the degree higher growth comes from longer hours for workers, or reductions in consumer consumption. Similarly, environmental or safety deregulation may increase GDP growth by a little bit, but still might not pass a cost-benefit test when the additional lives lost are considered.

This is not to say that there are no policies that could boost growth without these side effects, or that sometimes a tradeoff of growth for higher inequality would not be worthwhile. But large sacrifices in well-being or equity are typically not worth small increases in growth rates.

Concluding Thoughts

After the election many people expressed frustration that facts and analysis did not matter anymore. Paul Krugman cited the statistic that the three major networks spent a cumulative total of 32 minutes covering policy issues in the 2016 election. Many of the students I spoke to in the wake of the election questioned what the point of continuing to study economics or public policy and engage in rational, fact-based debates was. At the time I told them not to give up and that, in particular, facts and analysis have always mattered more in governing than campaigning, albeit still not enough for my tastes.

The debate over the American Healthcare Act, which is intended to repeal and replace the ACA, makes that point clearly. The Congressional Budget Office (CBO) estimated that the plan would result in 24 million additional uninsured, short-run premium increases, higher deductibles and higher premiums for lower-income and older people (it also estimated premiums would fall in the long run due to a combination of skimpier plans and sicker people dropping coverage). This estimate was based on a combination of empirical evidence, theory and casual analysis of the type I was discussing earlier, with nonpartisan analysts at CBO drawing on decades of research in health economics. And the analysis was heavily covered by the media which focused on the substance and what it meant for households—contributing to the withdrawal of the legislation and making it very unlikely that anything close to it will become law.

I certainly share the sentiment that facts and analysis play too small a role not just in campaigns but in governing. And I think there is a role for many types of communication and persuasion. For myself, I am not someone who could give a rousing speech at a rally so I will stick to my comparative advantage. And I do believe that the right response to the lack of sufficient weight for facts and analysis is to embrace more facts and analysis.