[SQUEAKING]

[RUSTLING]

[CLICKING]

PROFESSOR: Today, we are going to turn from talking about health care to talking about inequality and government transfer programs. And I want to start this chapter with a fact that I may have referenced already in this class, but it's one of I think, the most striking facts that's emerged in public policy debates in the last several decades, which the comparison was brought to light by the Freddie Gray riots in Baltimore.

In 2015, a young Black man, Freddie Gray, was arrested and killed in a police vehicle leading to a number of riots. And as people looked at the data for Baltimore, they noticed something really striking, which is shown in Figure 17.1, the first page of the handout. This shows neighborhoods in the city of Baltimore.

Sandtown-Winchester is where Freddie Gray lived. Three miles away is the neighborhood of Roland Park. The average life expectancy in Roland Park is 84. That's above the US average. As you can see, the US average is about almost 79 years at this point. The average life expectancy in Sandtown-Winchester, which was three 3 apart, was 67, which was below the US life expectancy at the end of World War II and below where North Korea is today. And these are three miles apart, with a 17-year difference in how long you expect to live.

This is reflected in lots of statistics. For example, the average income in Sandtown is $24,000 a year, whereas in Roland Park, it's $107,000 a year. In Roland Park, 2.5% of the children live below the federal poverty line. In Sandtown, it's 50%. So there's enormous disparities only three miles apart. And to me, that was just an incredibly striking illustration of the incredible amount of disparity we have in the US. And illustrating it really, in such an incredibly local context was powerful.

Now this is important to us in public finance because part of the rationale for government intervention-- remember, I talked in the first lecture with the why should the government intervene or when should the government intervene-- one, for efficiency purpose. and that's what we focused on throughout the semester, the impact of government intervention on efficiency. The other is for redistributive purposes, that if you go back to 14.01 or Chapter 2 of the book, we have a social welfare function.

That social welfare functions is where we aggregate individuals into a social measure of well-being. Most social welfare functions are implicitly redistributive. The vast majority of social welfare functions are implicitly redistributive, and that's because we have a diminishing marginal utility of consumption. So that means that the next dollar to Bill Gates means less than the next dollar to you, because he is at a vastly diminished marginal rate of consumption than you are.

So as a result, most models would imply that, but redistribution is a classic public good. Unless individuals are perfectly altruistic or have a strong, warm glow, privately, they will not redistribute. Redistribution has to be mandated publicly. Privately, we'll get too little of it, by definition, like with any other public good, because redistributing is helping everyone. And so we have the classic free rider problem of redistribution, which is that basically, we'd like other people to redistribute, not us.

So I'm not going to spend a lot more time on motivating why we want to redistribute in the US. I think you can go back and look at Chapter 2, or you can go back at 14.01 notes.

I think we take it as a given that for most people's preferences, not everyone, but for most people preferences, there's a feeling that there is some role to play in redistributing the resources in society from the wealthiest to the least wealthy. I think that's a fairly common view.

Let me rephrase that. There's a fairly common view that it is unfair, that the wealthy are so much more than the less wealthy. Whether the government should do something about it is more controversial, but it's a fairly common view that that's unfair.

But to inform that view, we need data. We can't just have one comparison of two neighborhoods. We need data on comparing how unequal our society is. And so what we do in this lecture is start with some of that data. So let's go to Table 17.1. Table 17.1. shows the distribution of income in our society.

And it shows it by income quintile. The way to read this table is if we had a perfectly equal society, all those numbers would be 20. Each row is 20% of the population. So it's the poorest, 20%, the next 20%, et cetera, all up to the richest 20%. So if society is perfectly equal, all those numbers would be 20.

If you look at 1967, that wasn't true. The 20% of the poorest people in society had only 4% of the income, whereas the richest 20% had 10 times as much. That gap shrunk initially before rising dramatically again, to the point where today, the poorest have much less than they did in 1967, and the richest control more than half the resources. So now, instead of that ratio being 10, it's more like 16 or 17. So basically, we've become much more unequal as a society over time.

One of the other striking ways to illustrate that is to look at Figure 17.2, which highlights that much of the growth of inequality is at the very, very top. This shows the share of income going to the top 1% of Americans. Today, one in every $4 goes to the 1% richest Americans, which was also true at the beginning of the 20th century, actually, somewhat lower. It then fell in the middle of the 20th century, before rising again in the 21st century, in the end of the 20th century, the 21st century, to be much higher levels. Yeah?

AUDIENCE: How much more skew [INAUDIBLE]?

PROFESSOR: Much more skewed.

AUDIENCE: [INAUDIBLE]

PROFESSOR: The rich would have a larger share. So the richest 1% have about 25% of the income. They have probably at least 50% of the wealth. And we'll talk about why that is. The bottom line is because the wealthier you are, the more you can save.

So basically, there's enormous inequality. You can actually look at us compared to other countries, because what's unequal? What defines it? Well, when we look at other countries-- look at Table 17.2. This shows slightly different numbers. This shows different parts of the income distribution, so the bottom 10% all the way up to the top 10% and the middle as well across developed countries.

And what you see is the US has the lowest share of its population in the bottom 10% of any other developed country on this list, and the US has-- I think it's the second highest share of its income in the top 10%, other than Mexico. So no country has a lower share of its income going to the poor, and only one country has a higher share of its income going to the wealthy than does the US.

So unequal both historically and relative to the rest of the world, we have extreme inequality. And that's what motivates the notion that we need to take some action to address that inequality. It motivates the notion that it's unfair that societies distribute resources this way, and that there may be a role for the government, may be a role for the government in addressing that inequality.

Now that is one way to think about society's inequality, but another way is say, wait a second. Why do I care? Maybe all I care about is not this relative measure, but a measure of absolute deprivation.

That is, imagine a world where everyone had enough to eat, housing, clothes, whatever. And in that world, someone got really rich. Would we care so much? I mean, as long as everyone's doing OK, why do I really care how much money rich people have? That is, why do we care about the relative?

It really is the absolute that matters. It's making sure that everyone can live a decent standard of living that really matters, and that's led to a focus, instead of on instead of relative measures of inequality, on absolute measures of inequality. And the most famous of those is the poverty line.

This is a great story, actually, for those who believe in the power of government bureaucrats to do good and powerful things. There's a woman named Mollie Orshansky who was working in the Division of Health and Human Services in 1964. It was actually called the Department of Health, Education, and Welfare then.

And she was charged with the exercise of figuring out what it means to be poor in America. She went to the [INAUDIBLE]. She said people in America, on average, at that point, spend a third of their budget on food. So she said, well, what does it cost to have a minimally, nutritionally adequate diet? She calculated that, she multiplied it by 3, and said, this is what it costs to live in America. That calculation is, today, the basis for trillions of dollars of redistribution. We've taken Mollie Orshansky calculation and just updated it by inflation ever since.

And the poverty line, which I've already mentioned a number of times without defining it, is the basis for trillions of dollars of the redistribution we do in our society. So the poverty line is our classic absolute deprivation measure.

You can see what the poverty line looks like in Table 17.3. I've been highlighting this. I've been talking about this before. Basically, the way this works is, it doesn't go up multiplicatively with family size. We assume that there's economies of scale of people living together.

So the poverty line for one individual is $13,000. For two people, it's not twice as much, because we think there's econ-- you can share the rent, you can share food, and you can share cleaning, cetera. So basically, the poverty line for a family of four is about twice the poverty line for an individual. So those are the poverty lines.

Now you can look at those numbers and make of them what you will. If you're from an affluent part of the country, you'd be like, oh my god, how can anyone live on anything near this? If you're in a less affluent part of the country, maybe those don't look so crazy to you, but that's our measure of the minimum you need to survive.

Now what's happened to that measure is quite different than equality. If you look at figure 17.3, you see a somewhat different pattern than we saw for inequality, which is if you look at everyone, all people, that's the red line. You see a dramatic decline in poverty during the 1960s, and it's basically been flat since.

Now what's interesting about the decline, it really was driven by the elderly. If you look at the 65 and over, that's the blue line. They had the dramatic reduction in poverty, whereas those, for example, for kids, the poverty reduction wasn't so dramatic. But the key thing is if you look over the last few decades, it's pretty flat.

We saw this enormous increase in income inequality. You don't see an enormous increase in poverty. It looks pretty flat. So that says that basically, how you feel about what's happening to resource in society and the sharing the pie depends on how you think about what the right measure is.

Now, with that in mind, there are two problems. There are a few problems with relying in this absolute measure. The first problem is, you have to decide what the level is. And while Mollie Orshansky did an admirable job, her answer is increasingly wrong. It's increasingly wrong for a number of reasons.

First of all, food is no longer about one-third of the typical household's budget. It's now 13% of the typical household's budget, and inflation and food has been much lower than inflation in other goods, in particularly housing and medical care, which have grown to be a much larger share of a person's budget.

So in fact, living at the same level as 1964 has gotten much harder, because the price of things that are a bigger and bigger share of our budget are the ones that are rising the fastest. That's one problem.

The second problem with the poverty line is, it's one national line, whereas we know the cost of living differs enormously around the country. So that's another problem with this, is you really like something which varies locally.

And then the third conceptual problem is that it's a very incomplete measure of income. For example, this is people's cash income. If you get Medicaid, it doesn't count as a resource for you. So if I take two people, if I'm Matt and I have the same cash income, but Matt gets Medicaid and I don't, we're considered equally poor.

Well, no, but Matt's got something I don't have. He has Medicaid. That's not counted. It's pre-tax. So if I pay bigger taxes than Matt, so therefore, I have fewer resources, that's not counted. So there's a number of incomplete features of this system.

Now this has been known for a long time, and there was an effort to try to revise the poverty line. So let me tell you one of the most interesting things that happened to me in Washington. I had a terrific secretary who was great. She took care of everything. She knew all the meetings. She said, go to that one. That's the big meeting. That's not a good one. Whatever.

One day, she comes to me. She says, John, this has never happened before, but they have a meeting on your books and they won't tell me where it is and what it's for. She said it has never happened before, in 30 years in government. She said, I don't know if we're at war or what the hell's going on, but this meeting is in an hour, and they won't tell me what it's about or where it is. Someone's going to come get you and bring you there. I'm like, wow, this could be pretty serious.

So they come get me. They bring me down to this soundproof room, and we sit there. And they say, we're thinking about revising the poverty line. And I'm like, I'm sorry? And they said, well, as long as the poverty line. We want to revise it and we're thinking about it.

Why the secret room? Well, because revising the poverty line is politically nightmarish, because for example, if you revise the poverty line to include benefits, that's going to make a lot of Black people seem less poor and white people seem more poor. So it's going to be a big redistribution of wealth.

We give money based on poverty line. If we revise to include benefits, suddenly we're shifting a bunch of money from Black people to white people. We're shifting a ton of money from Mississippi to New York, because people in New York who are at the poverty line are way poorer, effectively, than people in Mississippi. The political implications would have been a nightmare. And that's why they keep it super secret and decided never to do it.

There is something called a Supplemental Poverty Measure, which was then introduced, which you can track, and is a better measure of poverty, but it's never been adopted or an official government policy because it's too controversial. Yeah?

AUDIENCE: Is that [INAUDIBLE] more about because the people are getting from the government or because of--

PROFESSOR: No, it's just cost of living. The cost of living. They made one poverty line. So everybody below the poverty line got money. Well, shit, that was half the people in Mississippi and 10% of people in New York. So if you had poverty line that reflected the cost of living, you'd be giving a lot less to Mississippi and a lot more to New York. That was politically problematic.

So one problem is, you've got to define it, and that's incredibly hard. The second problem is that what it is, not only have to define technically, but what does it even mean to live minimally, adequately in society? So in 1950, you didn't have to have a car to live adequately in society. Today, you do. So just even what it means is really hard.

It's like the Inflation debate you've talked about in macro. You have to really define this, redefine this over time. So that's one problem.

The other problem we face is that it may be that actually, relative income inequality actually matters. It may be that it turns out that actually, we care not just about how much the poor have, but how much the rich have as well. And this comes from basic biology.

So they ran an experiment with a set of monkeys, and the monkeys were trained to hand over pebbles in exchange for cucumber slices, which they liked. But then one monkey was often offered a better deal. If he gave a pebble, he didn't get a cucumber slice. He got a grape, which the monkeys liked even more.

But then the second monkey was then offered the same deal as before, and it revolted. It said, wait a second. That's crazy. That monkey got offered a grape, but I'm just getting a cucumber slice. And you couldn't reason with the monkey, but you'd like to say, well, look, it's the same deal you had before. What's the problem? The problem was, someone else was getting a better deal. And that's actually the way our utility functions operate.

If you think about it, if we define our happiness and our sense of well-being, it's all relative. You talk about how, in fact, people in very poor societies are equally happy as people in rich societies. It's not quite true, but it's closer than you might think, because everyone around them is poor. And in fact, there's lots of evidence that basically, people's well-being is about relative income, not absolute income.

So for example, if you look at people's reported self well-being, it depends more on their neighbor's income than their income.

They did a cash transfer program in Kenya, where they gave people money, people that got the money were happier. The people whose neighbors got the money were sadder, regardless of whether they got the money or not.

And then one of my favorite studies of this is that basically, lottery winners in Canada that-- when someone won the lottery in Canada, their neighbors were more likely to go bankrupt. Think about that for a second. When somebody won the lottery, their neighbors were more likely to go bankrupt, because they suddenly had to spend more to keep up with their friends. Their friend won the lottery, so they're like, oh, he's got a nice car. I got a nice car.

So basically, the point is we all derive our sense of what's fair and what's just through relative inequality. So it's not obvious that relevant inequality is the wrong measure to look at, but it's a very deep and hard debate, which is should we care how much Elon Musk, to put an evil name to the story?

Should we really care how much he has? At one level, we shouldn't. He's invented some incredibly cool shit. Let him have as much money as he wants, as long as the rest of us have enough to get by.

At another level, if our utility is really about relative inequality and the role the government has to maximize social welfare, then we should care. And that's the real challenge. Questions about that?

So regardless of what the right measure is, the bottom line is, people care about unfairness. And then the question is, well, what can the government do? So the first question is, should the government do something about it? And the answer is, well, there's an obvious theoretical justification, which is redistribution is a public good. There's charity, but the private sector will not do the right amount of redistribution. It's a public good.

So what should the government do? Well, what the government does is, it has a number of what we call transfer programs. And these transfer programs are distinguished in two very important ways that we're going to have to keep in mind. This is not Medicaid level, but you got to know this.

The first way they're distinguished is categorical versus means tested. What does that mean? A categorical welfare program is one that you get based on your characteristics, like being blind, being a single mother. Means tested is something where you get purely on your income. And welfare programs sometimes can be one, sometimes the other, sometimes both. So that's the first distinction.

The second distinction is cash versus in kind, which is are you giving people money, or are you giving them goods? And these are two important distinctions you want to keep in mind as we talk about different welfare programs.

So let's start by talking about our big cash. And by the way, the term welfare gets hard to think about here, because we typically, in the US, when we say welfare, we don't mean the concept of economic well-being. We mean cash transfers to poor people. So the term welfare is thrown around political debates. It's not the term welfare as we've used it so far in this semester. It means redistribution.

So there's two big cash transfer programs. The first is called TANF, Temporary Assistance to Needy Families. TANF is a program that actually started in the Great Depression. It was originally called Aid to Families with Dependent Children. It was actually a program for widows whose husband had died in World War I and they couldn't support their kids.

Over time, it became a program, which was really focused on single mothers, either mothers, women who are single, sometimes through widowhood, but mostly through divorce or just out of marriage, childbearing. And it remains a program which is focused on that population. Technically, two-parent families can get it as well, but they're a very small share of the enrollment. It's a program basically focused on single moms.

How does it work? Basically, the way it works is, it's a classic cash welfare scheme. You get some benefit guarantee. So the benefits you get are some guaranteed, g, some amount, and that guarantee is, for example, $200 a month in Arkansas, all the way up to $1,000 a month in New Hampshire, so say $200 to $1,000 minus-- you get a guarantee-- minus a tax rate on your income.

So in other words, if your income 0, you get g. I should rewrite this. Let me rewrite this. b equals the max of 0 comma B minus g minus tau Y, because it can't go negative. So what you do is, you get a guarantee. But as you earn income, they reduce how much you get. So if y is 0, you get g. But if tau, for example, is 1, as it typically is, once your income gets to g, you get no more.

So the idea is it's a transfer, but it's a means-tested transfer. The higher your means, as measured by your income, the less money you get from the program. So it's a means-tested transfer. That's one of our major cash transfer programs. That goes to single moms, so it's means tested and categorical.

The second big cash transfer program is actually much bigger. It's Supplemental Security Income, SSI. Supplemental Security Income is basically money for those who are disabled but don't qualify for HINDI. DI. We talked about DI in chapter 14, but DI is for people who've worked for a while, but many, many people never were able to work or didn't work enough to qualify.

So SSI is categorical. You have to be disabled, and it's means tested. You have to be poor and not have enough resources to qualify for SSDI. So this is a categorical means-tested program.

Now the debate about welfare in the US is focused on this program, on TANF. SSI is 4 times as big as TANF. It's a much, much bigger program. This is about a $15 billion program. This is about a $60 billion program in normal times.

So interestingly, most of our distribution actually goes to disabled people, not to the very poor single moms. But that's been the focus of the welfare debate. So that's our two big cash programs.

Those are dominated by our in-kind programs. We spend much more money in the US on in-kind programs, of which we have a wide variety. The first, we have SNAP, Supplemental Nutrition Assistance Program. When I was growing up, it was called food stamps. This is a program which, if you're poor-- think of it as roughly going to people below the poverty line. If you live below the poverty line, you get a debit card that you can use to buy food, that you can use.

So basically what it does is, it says that essentially, we're not just going to give you cash. We're going to restrict you to using that card to buy food. We talked before about why governments may want to do this, because they're concerned that that money might get spent on something else, so paternalistically, they might want to force people to use it on food. It used to literally be stamps. Now it's a debit card that you can only use on food.

This is a very big program. This is a program for costs about $60 billion a year, comparable to the biggest cash benefit program. Now to get this, you have to either show that you're unable to work or that you're looking for work and have been able to find it. You can't just qualify for this. It's somewhat categorical. It used to be purely means tested and it was that the poor got it.

Now you have to be poor, but you have to show that you're registered for work and looking for work. We'll talk about why they added that condition. That's SNAP.

Of course, the monster in all this thing is Medicaid. Medicaid, which is about $700 billion a year, dominates everything else. Everything else combined is half the size of Medicaid. That's the biggest transfer program in the country. And we've talked about Medicaid. We don't need to talk more about that.

The third is public housing. Now public housing comes in two forms. The first form is what was colloquially called the projects, which are big buildings where we literally give you an apartment. That's been replaced over time with what's called Section 8 vouchers, which are basically coupons that you can take to rent an apartment.

Essentially, how public housing works is, you have to be low income. You typically have to have income below half of the area income, so this one is area adjusted. The other ones are not. This one is area adjusted. So income has to be below half of the typical area income.

If you're below half the typical area income, you can either qualify for an apartment or qualify for a voucher. The way the apartments work is, you get it, you pay 30% of your income towards the apartment, and the government pays the rest. So it's means tested. So essentially, the way it works is, we say we're going to give you an apartment. You have to contribute 30% of your income. So if your income is $0, you contribute nothing. If it becomes very high, you're not qualifying for the program. And then the government will pay the rest.

Section 8 vouchers are different. They're kind of interesting. Section 8 vouchers are-- we give you a piece of paper you can take to your landlord. It says to the landlord, the government will pay any amount of the rent above 30% of this person's income. So you have a Section 8 voucher. You go to landlord. The landlord collects 30% of your income as rent from you and the rest from the government.

This is increasingly what we're doing with public housing. We're increasingly moving away from projects, towards that. And this is about a $30 billion a year program.

Then, the last category, which is a big one, is a whole set of nutritional programs. This includes things like free or reduced price school meals, school breakfast and lunch, which is a major source of redistribution in our country. We spend about $20 billion a year on these.

In a typical year, about 22 million people get free or reduced price lunches. About 13 million get free or reduced price breakfasts. So it's a major program they spend about $20 billion a year on.

There's also something called the WIC program, which program for Women, Infants and Children, which gives them the actual food. It's like food stamps. But instead of giving you a debit, they literally give out milk, cheese, and other healthy products for women, infants, and children.

The bottom line is, actually, the vast majority of redistribution we do is in kind. Even the very biggest cash program is smaller than a lot of these in-kind programs. So the interesting question will come to is why? We'll come to that later in this lecture. So that's the way it works in a nutshell. Yeah?

AUDIENCE: [INAUDIBLE]

PROFESSOR: Excellent. The voucher is set equal to the maximum of the rent or I think it's the 40th percentile of the housing cost distribution in the city. They cap it, so you can't charge anything. They give you a voucher. You have to find an apartment, which is up to the 40th percentile, and then you get a voucher for that. Yeah?

AUDIENCE: Affordable housing [INAUDIBLE] that has, for example, states like Massachusetts would be the [INAUDIBLE] It's also an example of it, right?

PROFESSOR: Say it again. It's also what?

AUDIENCE: An example of [INAUDIBLE]?

PROFESSOR: Yeah. So basically, how do they allocate these vouchers? They do it by lottery. Yeah. They basically have a waiting list. You lottery to get onto a waiting list, and they pull you off the waiting list as units become available.

So with that as background, let's talk about how we think about the optimal determination of transfer programs. Let's say we've decided we want to transfer money. How do we think about the efficiency consequences of a transfer program? And here we come to the core of thinking about equity and redistribution economics, which is the efficiency-equity trade-off. And so we're going to embody the efficiency-equity trade-off.

And the best way to think about that-- one of my favorite concepts in economics-- I talked about this in the 14.01-- is the concept of Okun's leaky bucket. Arthur Okun was a famous economist. Arthur Okun said, think about transferring money for a rich person or a poor person, as if a government bureaucrat goes and collects the money from the rich person, carries it in a bucket, and dumps it out in front of the poor person.

So the reason that's useful is then you could say, well, imagine that for every dollar you he took from the rich person, he brought $1 to the poor person. Would you agree with that? And most people would say, yeah. If you can get $1 from a rich person and give it to a poor person, that's probably worth doing.

He said, but what if there was a leak in the bucket? What if from every dollar from the rich person, only $0.80 got to the poor person because $0.20 leaked along the way? I might say, well, that's OK. $0.70, $0.50. $0.10, 0? Some people might say it's OK, even at 0. If you think relative income inequality is what matters, it's OK to just destroy wealth at the top, which is why people are queasy about endorsing relative income inequality as a concept.

But basically, what Okun said is your taste for redistribution can be summarized at how much leak you're willing to put up with in the bucket. The more leak you're willing to put up with, the more you care about the poor, relative to the rich, getting money from the rich to the poor.

Some people would say, don't even do it with no leak. Some people would say, do it with a 100% leak, and others will land in between. That's just a great concept for thinking about it. And what it does is it highlights what is the problem of distribution. It's the leak in the bucket.

And where does the leak in the bucket come from? Well, the leak in the bucket comes from three sources. The first and smallest source is that you've got to hire someone to carry the bucket. If you're going to distribute, there's got to be a redistributive administrative mechanism, and that costs money. It turns out, that's not a big deal, but it's something.

The second source of leak in the bucket we'll talk about starting in a couple of lectures from now, which is to raise the money. You have to tax people. You have to tax the rich. And when you tax the rich, that can have distortionary consequences for efficiency, and we'll come to that in a couple of lectures.

What I'll focus on now is the third source of leak in the bucket, which is that if you transfer to the poor, that could cause them to reduce their economic activity.

So to see this, let's talk about a pure means-tested transfer program, a pure means-tested transfer transform like TANF. let's Talk about a program like TANF, where the government's going to come to you and say-- and let's set tau equal to 1. So the government's coming to you and saying, I'm going to give you money. As long as your income is below g, you're going to get money. And that money is going to depend on your income. For every dollar of income, I give you one less dollar in grant.

First of all, that is actually an easy to understand and relatively attractive system. It turns out, under this system, if I took everyone in the US who lives below poverty and implemented this system at their income today, I could end poverty in the US for less than $200 billion. We could have no more poor people in the US, according to the poverty line, for $180 billion. That's pretty good, I mean, every year, but we spent more than that on other things. That's not a crazy number.

The problem with that number is it misses the moral hazard consequence of actually doing that transfer. And that's illustrated well in figure 17.4.

Here we have an individual's decision on how hard to work. They're doing the standard leisure consumption trade-off. On the x-axis, you have hours of leisure per year. On the y-axis, you have dollars of consumption. And imagine they earn 15 bucks an hour. And imagine there's 2,000 hours a year to work.

So their budget constraint, which runs from A to C, says that they could either have $30,000 of consumption and no leisure or 2,000 hours of leisure and no consumption or some combination in between, with a marginal rate of transformation of 15 bucks an hour.

Now imagine we come into that world and we put in the following system. We say we're going to put in this system, and we're going to set g equal to the poverty line, which is $12,760. Let's think about individuals here. So we're going to implement this system with g equal to 12,760 and tau equal to 1. What would that do to the budget constraint?

What it would do is, it would add a flat segment running so the new budget from A to B would be unchanged. But at point B, you'd have a flat segment over to D and then down to C. Why? Because once your income is below $12,760, or alternatively, once you're taking more than 1,149 hours of leisure, each additional dollar of earnings does nothing for you. Why? Because the government just taxes it away.

So it doesn't matter if I work 1,600 hours or if I take 1,600 hours of leisure, or 1,149 hours of leisure. I get the same thing. I get $12,760. So the budget constraint becomes flat at that point. Questions about that?

Now think about what that does to labor supply. Let's start with person x. Person x was making only $6,000 and working only 400 hours a year, 1,600 hours of leisure. Person x unambiguously will move to point D. That's a dominant strategy for them. They get more leisure and more consumption. So unambiguously, they move to point D.

On the other hand, now let's take someone like person z. Person z will not be affected by this welfare program. Why? Because they like consumption so much that a program which leaves them with $12,760 of income is irrelevant. They're not willing to live at that level. They'd rather just go ahead and work and have their $22,000 of consumption.

What about person y? Well, person y is purposely and painstakingly drawn, so that their indifference curve-- it's not really a very good curve. It's hard to draw it this way. But basically, the point is, it's tangent at y. They originally took 1,067 hours of leisure and consumed 14,000. But their indifference curve cuts below the horizontal line from B to D. As a result, moving to point D gives them a higher level of utility.

You can see that since their indifference curve cuts from above that flat line from B to D, that at point D, they have a higher utility. So they will quit. They will be willing to consume somewhat less to get a lot more leisure, just like the Peltzman diagram for education crowd out. It's a similar crowded argument here, more than 100% crowd out.

You'll literally take away all their labor supply. And not just you're not just take away the labor supply you're taking from x. You'll take even more than that, because they'll drop down their consumption a bit to qualify for this program. Questions about that?

Think about what this does to our estimate of the cost of the program. If we just consider people like x and realize that people below the poverty line aren't going to-- we aren't going to give them this and we're just going to give them g because they're all going to quit, the cost doubles.

If we consider people like y-- let's say people living 25% above the poverty line react that way, that adds another 50% to the cost. So now you're talking about a really expensive program through these moral hazard effects.

The point is that these moral hazard effects make redistribution a lot more costly than you would think in their absence. And that's the standard moral hazard problem or the leak in Okun's bucket that comes from moral hazard of poor people lowering their resources to qualify for a program.

Now it seems there's a simple answer to this problem, which is, well, the problem is this. Why make money with 100% tax rate? We should lower the tax rate, so it's an incentive to work. We should redistribute, but let's have an incentive to work. Indeed, what if we change this 1 to 0.5?

Well, then we would get a figure like Figure 17.5. Figure 17.5 says that for consumption above $25,520 or leisure of less than 299 hours a year, the budget rate hasn't changed. Starting at that point, the budget rate now has a slope that's half as steep. Why half as steep? Because essentially, there's a 50% tax on your set wage. Essentially, for every hour you work, you take home $7.50 instead of $15. Why? Because you give up that government transfer. It's an implicit tax of 50%.

So the line, which intersects at B2, the a slope that's 50% as steep, $7.50, all the way to point D. What does that do to people's decisions? Well, for person x, they work more, or they might work more because now, you've lowered their tax rate. For person y, they might work more as well because you lower the tax rate.

So if you stop there, you'd say, well this is unambiguously a better system. The problem is, now z is in the game. Now z, who wasn't on welfare before, suddenly says, well, I want to be in welfare now, too. Why? Because I don't have to give up that much consumption and I can get a lot more leisure. I can move from Z1 to Z2. I don't have to give up that much consumption and I get a lot more leisure.

So the problem is, yes, you save money in x and y, but you spent money on z. You've brought more people into the program. And whether, on net, you save money or not depends on the relative size of these reactions. This is what we call the iron law of welfare policy, which is that fundamentally-- the iron triangle. I'm sorry.

Fundamentally, we want to try the iron triangle of welfare policy. We fundamentally want to try to accomplish three things. We want to-- if I reform my welfare system, my existing welfare system, if I change it, I'm trying to accomplish three things simultaneously. I want to encourage work that has reduced the moral hazard costs. I want to encourage work. I want to redistribute income, and I want to lower government costs.

So I have three goals I'm trying to achieve, but I only have two instruments, the tax rate and g. So I'm trying to accomplish three goals with two instruments, and I can't do it. In other words, if I gave up on one of these goals, I could do it. If I, for example, said I don't care about redistributing, well, I could encourage work and save the government money by just having a lower g. If I had a lower g, I would encourage work and save the government money, but I redistribute less income.

And you could see how you could use g and tau to solve any two of these three problems, but you can't solve all three simultaneously. And that is the fundamental challenge of welfare policy. This iron triangle problem was a standard cash welfare program you cannot solve. Questions about that?

So that is what motivates the really interesting work. There's a lot of interesting work, of course, in thinking about how bad this moral hazard problem is. But other than that, it's a pretty simple concept. The more interesting thing is, how do we get around it? Yeah, Enoch?

AUDIENCE: [INAUDIBLE] the thoughts around UBI.

PROFESSOR: I'll come back to UBI the next lecture.

So how do we get around this? Well, one way is to move towards categorical welfare, and that's by the following thought experiment. At the end of the day, there's two reasons why my income might differ from Valerie's. One is because I'm more skilled, and two is because I work harder.

If we think skill is something you're born with, we want to redistribute from the high skill to low skills. It's basically luck. If you're born lucky that you're a high-skilled person, if I'm born lucky, a high skill person, poor Valerie is a low-skilled person, she's born unlucky, we'd like to redistribute from me to her. But if it's that I'm working hard and she's lazy, we maybe don't want to shoot from me to her. That's moral hazard.

So since that's the problem we have here, that we're trying to distribute on a concept income which embodies two different things, the thing we care about, which is who has the ability and who doesn't and the thing we don't want to distort, which is how hard people work--

Well, imagine a world where everyone was born with an indelible tattoo on their forehead that said, high ability, low ability, and there was no way to scrub it off, no way to change it, well, then we could solve the moral hazard problem. We'd say, you've got a low ability thing on your forehead. Here's some money. You've got high ability. You get no money. That solves the problem because if you redistribute on something people can't change, then there's no moral hazard.

Moral hazard arises from changing your behavior to take advantage of a government program. But if I redistribute something you can't change, there'll be no moral hazard. So there's a simple answer.

So for example, what if we said we're going to, for sure, give big benefits to people who are blind, who have lost an arm? Ignore my nub city, horrible example from the previous lecture. In that case, you might think, look, that is beyond people's control. They're not blinding themselves or cutting off their arms to get benefits. So that's an OK way to distribute. I'm not worried about moral hazard. So you might think that basically, an advantage, a third tool, besides g and tau, is using categorical restrictions as a way of redistributing.

So basically, this comes the idea of targeting. The idea is, by targeting our dollars, we can spend them more effectively to meet these goals. So what would make a good targeting device? Well, it's two things. First of all, it's something you can't change. And second of all, it's something that's correlated with being poor. Let's not forget the second one.

For example, if I said I'm going to set up a new program that's going to be $1 million to everyone who is a Fortune 500 CEO last year, that would meet the first condition. They can't change that. It wouldn't be the second condition. That wouldn't be a very good transfer program. So you need both, something you can't change, but also, it's correlated with earnings ability. That's your ultimate. That's when something like blindness might work, or disability, or other things.

Now the major targeting mechanism used by the US government for cash transfers, for many decades, was single motherhood. The idea was, single motherhood, for sure, met the second condition, which is that single mothers are much, much poorer. The poverty rate for single female-headed families with children is almost 30%, which is about triple the poverty rate for two-headed families with children.

So they're certainly poor. The question is, is it something you can change? Well, clearly, you can. You're not innately a single mom. That's the result of some choices and some other things. So the question is, how big is the moral hazard from targeting single motherhood?

Here's what's really fascinating about this. Think about it. On the one hand, you gain efficiency by giving the money to people are poor, regardless of how hard they work or not. On the other hand, you create a new problem, which is creating potentially single mothers, and it's a cost of targeting. You change behavior to meet the target. There's a new distortion in our economy, and there's lots of evidence that growing up in a single-parent household is bad for you, not that there aren't success stories. But on average, people who grow up in a single-parent household do less well than people who grow up with two parents.

So if we're suddenly creating all these single-parent households, that would be bad. And this is what led to one of the most fundamental debates in welfare reform policy-- it dominated the period when I was a student-- which was a famous conservative sociologist called Charles Murray.

And Charles Murray went to the data and noticed the following trend. He noticed that until-- well, actually, you can do this. You got to be honest. Take Figure 17.6 and hold your hand. Cut it off at 1979, or 1982, or something like that. The red line is the size of government transfers. The green line is single motherhood rate.

What you see is, as government transfers fell-- actually, no, it doesn't even work there. It's not even very good. You can't even see in this graph.

The bottom line is, for some period of time, he argued that as government transfers rose, single motherhood rose, and it was true over some small period of time. So basically, he was arguing that more transfers were causing more single motherhood. Of course, you can see the time series looks like, if anything, the opposite.

And in fact, there's now been hundreds of studies which have shown that single motherhood does not respond to the generosity of cash welfare benefits. Now if you ask many politicians, they'll claim it's like a law of nature, that if you give cash to single moms, you'll create more single moms. But in fact, that's an empirical question. The answer is, we've answered it, which is tying cash benefits to single motherhood, does not induce more single motherhood.

So it seems like single motherhood is actually a pretty good targeting device. It doesn't really respond to being targeted, and it identifies those who are low income. So that's an example of how we think about using categorical benefits.

So basically, a very popular decision was, at one point-- as I, said people can actually get TANF, even if they're married. Very few people do, but you can. That was very popular. Ooh, we'll stop creating all these single mothers by giving it. What they didn't realize is, they didn't stop creating single mothers. They just gave out a lot more cash. And so it was like moving to lowering that tax rate. You didn't achieve all your goals. Questions about that?

So that is one way you can lower the moral hazard, one way to solve this iron triangle problem. The second way is moving from cash to in-kind transfers. Moving from cash in-kind transfers also helps you solve this problem in a more indirect way.

With categorical welfare, we do targeting. We find those who really need help and give money to them. With in-kind benefits, we do what we call self-selection, which is that we get those who need the benefits to identify themselves. And why is that true? That's because everyone wants cash, but not everyone wants to go to a soup kitchen.

But if I give away cash, everyone's going to claim it. They're going to pretend they're poor and get it. But if I'm giving away a shitty public apartment or waiting outside in the rain for a soup kitchen, only people are really poor are going to actually do that, and that's a way to get them to reveal their true underlying ability, even if it's not stamped on their forehead.

So this means, basically, the idea is, once again, we have two types of people, those that are innately skilled and those-- if you look at poor people, we have two types of poor people, innately skilled, lazy people and innately unskilled, hardworking people. The government would like to differentiate them.

By giving cash, you can't differentiate them because everyone wants cash. But if you give them something which people really would only value if they had to have it, only the people who are really unskilled don't have a choice will take that. It's called an ordeal mechanism, so it's self-selection through an ordeal mechanism.

I'm going to illustrate this. This is a hard concept because what it basically says, is you can make people better off by making them worse off. You make people better off by making them worse off. Let me explain what I mean. We'll do a simple example.

Imagine that the government wants to set up a soup kitchen, and it has to decide how much to spend on hiring workers to staff the soup kitchen. And the more workers it hires, the shorter the wait to get in to get soup. So right now, the government's got this big line outside the soup kitchen, and it's got to decide, is that a good thing or a bad thing? Well, it's a bad thing that people will wait in rain for their soup, but it has an advantage. It's important to recognize.

So imagine that there's two types of people, low potential earnings and high potential earnings. The utility function for low potential earnings person, u sub l is 240. U sub l is 240s minus w, where's s is the number of bowls of soup and w is the amount of minutes they wait for soup.

The utility of a high-potential earnings person is 120s minus 2w. Why does it make sense? Why do these two differences make sense in this equation? First of all, why would a high-potential person have a lower wait than the amount of soup they get? What is this showing? What is illustrating? Why is that? Yeah? Well, they have a lower marginal utility of consumption, because they can always get more food if they want. They're high ability. So they don't need the soup as much.

Why do we subtract 2 times the number of minutes and only 1 times 100 minutes for that person? Enoch?

AUDIENCE: [INAUDIBLE]

PROFESSOR: Opportunity cost. If you're high skilled, you have a higher opportunity cost waiting around outside the soup kitchen. So this is a totally plausible comparison of two types, the type that really needs the Soup but doesn't mind waiting and the type doesn't need the soup as much and minds waiting more.

And imagine that we're going to find social welfare as simply the sum of these. Adding those up as social welfare. We're not going to put more weight on the poor and the rich. We're just going to say we're going to add them together.

Now imagine that the government implements a system with no waiting. W equals 0. And imagine a system with no waiting to make life easy. Imagine that each group gets the same amount of soup but no waiting. Just imagine it's split. It's just allocated randomly.

Well, if w equals 0, u sub l is 240 because they get one soup. Let's say there's two bowls of soup. They get one soup. And u sub h is 120 for a total social welfare 360. So if there's no waiting time, they each get a bowl of soup and social welfare is 360, because this term drops out because there's no waiting.

Now imagine the government, instead, said, I'm not going to hire so many workers, and I'm going to make people wait outside for 61 minutes before they get soup. I'm going to literally mandate-- I'm going to be so mean. I'm going to mandate you have to stand out-- even if there's no one inside, just stand outside in the fucking rain for 61 minutes and wait to get your soup. Awful, right?

Except think about what it does. At a 61-minute wait, the high-ability person no longer wants soup. The utility goes negative. They're not going to wait. So with a 61-minute wait, u sub h equals 0. What's u sub l? Well, now they get two bowls of soup, so they get 480 minus 61, which equals 419.

So total social welfare has risen from 360 to 419. We've made poor people better off by making them worse off. It's a bizarre concept but really, really interesting. Why is that? What's the key here? It's because we have a fixed government budget. With an infinite budget, it wouldn't matter. In the fixed government budget, the more you can target to those who really need it, the more efficient.

We could target it by having something stamped on people's heads or single motherhood, or we could target it by letting people reveal whether they need it or not. And one of the reasons we have in-kind benefits is to let people reveal how much they value the good.

So for example, there's a really cool study I talk about in the book, which is what happened when a state-- the government ran an experiment. It was about taking care of old people in their homes. The government ran an experiment. They either gave people cash or they gave them a worker to work in their home.

And what they found was, when they gave people the worker to work in their home, it cost a ton less, and the people who used it were the people who were really sick. [INAUDIBLE] cash. Everyone used it. It cost a ton more. It was much better targeted when they actually said, well, you got to have the worker. People were like, I'm not going to do that. I don't want someone in my house, whereas you gave them cash, they're like, sure, I'll take that cash. So basically, people were self-selecting in a way that allowed them to target the money. Questions about that? Yeah?

AUDIENCE: [INAUDIBLE] I don't know if this is just a sample or whatever of people can't get to the soup kitchen.

PROFESSOR: Well, once again, I'm not saying all soup kitchens in America should have a line. I'm saying this is the trade off, and you want to evaluate that. It may be that what you're saying is that maybe there's a big weight on w for these people because they can't get there. Well, then that would change the answer. If this was 2w, you wouldn't like this new policy. You'd be worse off under the new policy. The point is to illustrate the trade-off, And you're saying that's another issue of the trade-off. Yeah?

AUDIENCE: How about increasing the cost of accessing a program with people to [INAUDIBLE] the population that you want [INAUDIBLE].

PROFESSOR: So basically, let me rephrase your question a little bit. The bottom line is that we talked about only partial take up, that some people don't take up benefits. That could be good. That could be illustrating who really needs it. And in fact, some grad student at MIT has a really cool new study where they look across seven different transfer programs. All the programs target you based on what your income is today.

But of course, people's income today can be very different than income over their life. We really want to care about people who are-- so a student has low income. A student at MIT might have low income. We don't really want to distribute to them. Sorry, guys. You're going to be fine.

What they find is that people who take up, at any given point in time are the same people who end up with lower lifetime income. The people you want to take the program are the ones who choose to take it. The ones who don't take it are the ones whose incomes are temporarily low. But actually, their income is going to be higher later.

So that's a reason why, in some sense, incomplete take up might be good. That's another argument for in-kind transfers. Yeah, Enoch?

AUDIENCE: Why doesn't the government not make it as hard as possible to get these programs to just make it increasingly more difficult?

PROFESSOR: Because of what-- Sophia, right? Because of what Sophia pointed out, which is that basically, there's a cost. That ordeal mechanism has a cost. They got to wait in the rain. That sucks. So you've got to trade off how bad the cost is against the targeting benefit. And the sweet spot is one where it's enough of a pain to deter the high ability, but it's still very valuable for the low ability, as in this example.

But like I said, if you change this to 2w or change this to 120, it doesn't work. So really, that's the trade-off, the cost of the ordeal versus the benefit of targeting to the group that really needs it. And that's the trade-off here. Yeah?

AUDIENCE: If w is too high, then you get social welfare that's below the--

PROFESSOR: Yes.

AUDIENCE: Is there evidence that the government's target [INAUDIBLE] the perfect amount of pain--

PROFESSOR: That's an awesome question. It's an awesome question. basically, there's the fundamental challenge. Here's the problem with that whole study. It comes back to poverty line measurement, which is-- let's go back to the poverty line measurement.

Ideally, if we measure poverty, we'd include what you're getting in Medicaid. But then I have to ask what it's worth to you to get Medicaid. I want a dollar metric. Well, how the hell do I know what it's worth to you to get Medicaid? You could use the average cost of Medicaid, but it's worth a lot more to a sick person than a healthy person.

It's the same thing here, which is, in some sense, to really do this right. we need to not only know what the wait on w is for things like the wheelchair bound. We need to know how much they actually value this relative to cash. And this will come back to the UBI debate we'll talk about next time, which is, in some sense, we may be outsmarting ourselves, doing all these in-kind benefits. Because the truth is, it's just better to give people cash and let them figure out what they want to spend it on.

Now that said, there are a number of other advantages of in-kind programs. Another advantage that's a really interesting one is that it affects the market. So in this cool project in Mexico, where they give some people cash, some communities got a cash transfer and some communities got an in-kind transfer of food. What they found was the communities that got the in-kind transfer, the same size, were better off. Why? Because of the market for food.

When you gave people-- Here's. The market for food-- quantity and price, you've got some initial equilibrium. When you gave people cash, what did that do? It raised the demand for food. So demand shifted. It raised demand. Demand shifted out. That led to a higher price for food, more quantity of food, but a higher price.

When you give them in-kind, what does it do? It raises the supply. When you raise the supply-- when we lower supply, you also get more, but at a lower price. Why does that matter? Because some people aren't getting cash transfers. So in-kind had the benefit that only redistributed it. It lowered the price for everyone else, which is a cool feature of it. So that's another interesting feature of in-kind, is that it can have this market adjustment effect. Yeah?

AUDIENCE: [INAUDIBLE] they got food from food vendors within the community [INAUDIBLE].

PROFESSOR: Well, no. You're right, because there's also an effect on the producers themselves. So you'd have to consider there's a general equilibrium where you consider the producers themselves. This is a diagram that works with the food that all comes from other people. Once in the community, you then have to wait for effect of the producers in the community.

And then basically, the other thing that might be good about in-kind transfers is that sometimes, cash can't buy things. So for example, let's think about giving you health insurance versus giving you, say, $10,000. Well, especially, let's think before the ACA.

Before the ACA, if I gave a sick person $10,000, they couldn't do anything with it. They couldn't get the health insurance because they could be discriminated against. If I gave them health insurance, they got it. So the other thing is, there may be situations where the government is essentially fixing a market failure by redistributing in kind rather than with cash. So that's another argument for in-kind.

And then the final argument for in-kind is the one that dominates all of them. I hate it, but it's just politics. It's just that. Politicians are more sympathetic about giving people food and medical care than cash. That's the main reason why we give most of the money in kind, I'm sorry to say. All the fun economics is just fun economics. But the truth is, from a chapter 9 perspective, the main reason politicians get benefits in kind is because they don't trust people with the cash. Yeah?

AUDIENCE: Would a reimbursement be the same thing as cash?

PROFESSOR: A reimbursement?

AUDIENCE: Like, a rebate program.

PROFESSOR: Yeah. Yeah. Actually, let's go back to chapter 10. That'd be like a matching grant. You can either give a block grant, which is just giving them cash. If you match the grant, you say, we're going to rebate you as you buy it. That would be a middle ground, but that wouldn't have the a deal benefit of actually tying it to it.

So fundamentally, we have this-- Yeah?

AUDIENCE: [INAUDIBLE] because you argued that both the time and cash benefit [INAUDIBLE]. How do you decide?

PROFESSOR: Great question. Actually, there's enormous disagreement in the economic profession, including between myself and my colleagues. So my colleague, Amy Finkelstein, believes we should stop giving people health insurance to give them cash. I disagree. I think that basically, there's enough imperfections in the health insurance decision. Her view is in a world where fully informed individuals, they'd rather have the cash. I think there's enough behavioral problems. We should give them health insurance instead. But she's smarter than I am, and that's an honest debate we're having. And so basically, I think there's a real debate.

If I just summarized the consensus-- and I wouldn't want to be quizzed by my Nobel Prize-winning colleagues, Esther Duflo and Abhijit Banerjee on this. They're the experts. But my guess is, where the consensus today is that in developing countries, it's better to just give cash.

There are different market failures and things that make it hard for the government to figure exactly how to give them the goods. In developed countries, I think there's more of an open debate.

AUDIENCE: [INAUDIBLE]

PROFESSOR: So that's the second mechanism. So once again, let's go back. We're trying to go around this iron triangle. One mechanism is trying to tie it to the people who really need, it like blind people and single mothers. The other is to give it in kind, so people will really reveal themselves when they need it.

And then there's, finally, the easiest answer of all, which is, let's just increase people's options so they don't need it. Let's increase people's outside options. So for example, go to Figure 17.8,

We have our old-style welfare program where people person x jumped on and person z does. I'm showing you person y here. And person y went to point d. That's the blue line.

What if I raised your wage? What if people's wages increased from $15 an hour to $17.50? What does that do to the budget constraint? Well, it pivots it up. And now look. The person-wise indifference curve no longer crosses under that horizontal segment because they don't want to be on welfare anymore. So by increasing outside opportunities, we've actually lowered our redistribution spending. It's sort of simple, right? Make people well off, so they don't need welfare. It's a fancy diagram for a pretty simple concept, which is to make people better off so don't need welfare.

So the question is, how do you do that? How do you increase people's outside options, so that they're less reliant on the welfare system? And there's a number of mechanisms that we use to increase outside options. And I'm going to go through them now. I might not get through them today. I'll finish it up next time, if not.

So how do we people increase people's outside options? The first way we do, the classic way, is through training. That is, let's say, we say to you, look, if you're on welfare, you have to enter a training program, so that you can increase your skills and basically work your way off welfare. So that's the classic group we called the New Democrats in the '80s and '90s, which are the Bill Clinton, more centrist wing of the Democratic Party that took over.

And their view was, we want to help poor people, but we really we understand economics, and we think moral hazard is a problem. So what we're going to do is try to get people to work their way up through training them.

There's been an enormous amount of studies. They actually ran a huge amount of randomized trials of training programs across states. And the evidence is meh. Basically, training works a bit. Essentially, if you train people, you get a few of them off welfare. It roughly pays for itself in terms of how much welfare spending you get but it's not transformative. It doesn't really get a whole lot of people off welfare. It kind of works, but not incredibly well. So that was the first approach. Yeah?

AUDIENCE: [INAUDIBLE]

PROFESSOR: It's paid from the government budget. That's the first approach. The second approach is, let's raise the minimum wage. If people earn more in the labor market, they won't need welfare. And in fact, there are studies that show that with a higher minimum wage, fewer people are getting government transfers. It's mechanical, if people are earning more.

Now the trick, of course, is it's not mechanical. Let me back up. It's not mechanical because we have the standard problem with the minimum wage. This isn't a labor economics class. How many people took 1403 with David Autor? Did you take it with David Autor? So he talks a lot about this. He's done a lot of work. I mentioned it in 14.01.

The bottom line, the question of the minimum wage in a standard economic model, is by raising the wage floor, you interfere with the free labor market, and you could cause people to lose their jobs. But in fact, there's now been decades of evidence which suggest that's not really true, that, in fact, we live in a world of imperfect labor markets where employers have monopsony power and therefore, in that world, you can actually raise the minimum wage without creating unemployment.

And at least in the range where we've changed the minimum wage, that seems to be largely true. I think the consensus of the evidence is in the range of $5 to $10 an hour, we've changed the minimum wage. It looks like changing minimum wage does not really cause unemployment.

Of course, now the minimum wage is much higher than it was. It's now going to about $15 an hour. The evidence that level is a little more mixed. So there is some point at which even the best evidence of raising the minimum wage would agree that there is some point at which raising the minimum wage will cause unemployment.

It's clearly a point above $10 an hour. And remember, our federal minimum wage is $7.25 an hour. So it's clearly higher than where the minimum wage is today. Whether it's as high as where minimum wage is in places like Massachusetts, where it's $15 an hour, I think, likely, the answer is yes, that you can do that without causing unemployment. But I'd say the evidence is still a little more mixed on that. Enoch you have a quick?

AUDIENCE: Yeah, I was going to ask, because I know the Congressional Budget Office, when that was being discussed, did a lot of research on that. And I think they even have an interactive simulation on how much you raise the minimum wage and--

PROFESSOR: The displacement effects. Yeah, but that's their estimates, and they do as well as they can with that. But I think the bottom line is, you can only live with the weight the evidence is. We don't have that many experiments of $15 an hour, so you don't care. And we think we think it could matter. This isn't linear.

Clearly, a raise the minimum wage from $1 to $2 will have no effect on employment because everybody makes more than $2. From raising the minimum wage to $100, it would cause massive unemployment because most people don't make $100 an hour. So the question is how that function looks. And there may be estimates, but they're still not really well identified.

So we could raise the minimum wage, but we certainly know whether or not the cause of unemployment-- there's clear evidence that raising the minimum wage leads to less spending on government transfers. There's a study that finds that for every $1 increase in the minimum wage, government expenditures decrease by 4%.

Clearly, another way to reduce government expenditure is to raise the minimum wage. That's another way to increase outside options with the potential controversy over whether it causes unemployment.

A third approach that's a little more subtle and interesting is labor market subsidies, which is what if you actually paid people to work? What if instead of tax equals work, you actually paid them to work? So for example-- we'll talk about this much more in chapter 21-- we have a program in the US called the earned income tax credit. And we'll talk a lot more in chapter 21, so I'm just going to go briefly through that here. It's actually the government's largest cash redistribution program.

The way the EITC works is, for people who are poor, for every dollar you earn, instead of paying taxes, you get $0.40 from the government. So it's a subsidy to work. For every dollar you earn, you actually get $0.40 more from the government rather than paying tax on it, up to a certain level. Then you start to pay tax again.

And the idea is that basically, by doing that, you will get people to go to work and get off welfare. The problem is that it's incredibly expensive. And if you think about how we spend $15 billion a year on cash welfare and the EITC is $80 billion a year, that can't really be a good enough justification for the EITC.

And that's why other people have suggested a much more targeted form of this, which is take people who are on welfare today and pay them to get off. So basically, the best evidence is the program in Canada, which was the SSP-- what does that stand for, SSP? Self-Sufficiency Project.

It was a random experiment, and they went to Canadian welfare recipients who'd been receiving welfare for more than one year. And they said, if you find a full-time job, we will, for every dollar you earn, give you another dollar. We'll literally double your earnings. And they randomly said that to some people on welfare and to some people, they didn't say that. And what they found was an enormous response.

They found that basically, there was almost a 50% increase in the employment rate of the treatment group. There was a huge increase in the employment rate of treatment group. And in fact, they increased their earnings so much that the program paid for itself. If you looked at how much less the government spent on welfare and how much the government ultimately collected in taxes, the program paid for itself.

The problem was, once the program ended, the effect went away. So the hope was that you'd get people used to working, and then you could pull the program away and it would still work. It didn't. That didn't happen. So it looks like to make this program work, we've just got to keep going.

So basically, that leads to the really interesting trade off-between general wage subsidies and targeted wage subsidies, which is that the general wage subsidy is way more expensive. That's the disadvantage. The target is cheaper, but what about the person who didn't get welfare? What if I'm just a person who felt like I shouldn't take a handout from the government? Then I don't benefit from this. That seems a bit unfair.

So let's say Paul and I are equally poor. I'm someone who's not embarrassed by taking a check from the government. He is. Then, suddenly, I get this huge benefit and he doesn't? That seems kind of unfair. Moreover, what pernicious effect could it have? What could be the pernicious effect if I said that once you're on welfare, you get this program and if you're not, you don't. Yeah? People could join welfare. It's what's called the entry effect. Basically, you could actually end up creating a whole new class of people on welfare because they joined to qualify for the program.

Now, it turned out with the SSP, that didn't happen. Because with the SSP, you had to be on welfare for a whole year to qualify, and there weren't many people who wanted to wait a whole year to get this subsidy. So even though there's a big subsidy, they weren't willing to go on welfare for a year to get it.

But by making them Wait a year, you get lots of people who deserved it, who maybe dropped out after six months and didn't get it. So that's the trade-off. The more you target it, the more targeted it is, the less money you spend. But there are people you're not helping. The ITC helps everyone. Everyone gets low-income benefits from it, but it costs a ton more money. That's why we have social welfare functions.

As we did in 14.01, essentially, you want to ask yourself, what is the benefit of this bigger program in terms of the moral hazard it costs and the benefit it gives? It turns out-- we'll show you in chapter 21-- there is no trade-off for the EITC The EITC actually is a patch to the bucket, that it redistributes and makes money for the government. And we'll talk about that next time or chapter 21. Let's stop there.